AFRL-RH-FS-TR-2015-0091

90-DAY INHALATION TOXICITY STUDY OF SWEDISH BIOFUEL ALCOHOL-TO-JET (ATJ) SYNTHETIC KEROSENE WITH AROMATICS (SPA) IN RATS WITH NEUROTOXICITY TESTING AND GENOTOXICITY ASSAY

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September 2015

Final Report for July 2012 to Sep 2015

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
30-09-2015	Final	7/2012 – 9/2015

4. TITLE AND SUBTITLE
90-Day Inhalation Toxicity Study of Swedish Biofuel Alcohol-to-Jet (ATJ) Synthetic Kerosene with Aromatics (SPA) in Rats with Neurotoxicity Testing and Genotoxicity Assay

5a. CONTRACT NUMBER
FA8650-10-2-6062

5b. GRANT NUMBER
NA

5c. PROGRAM ELEMENT NUMBER
62202F

6. AUTHOR(S)
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5d. PROJECT NUMBER
OAFW

5e. TASK NUMBER
P0

5f. WORK UNIT NUMBER
02/H04S

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
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8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Air Force Materiel Command*
Air Force Research Laboratory
711th Human Performance Wing
Human Effectiveness Directorate
Bioeffects Division
Molecular Bioeffects Branch
Wright-Patterson AFB OH 45433-5707

10. SPONSOR/MONITOR'S ACRONYM(S)
711 HPW/RHDJ

11. SPONSORING/MONITORING AGENCY REPORT NUMBER
AFRL-RH-FS-TR-2015-0091

12. DISTRIBUTION AVAILABILITY STATEMENT
Distribution Statement A: Approved for public release, unlimited distribution. Cleared 88 PA No: 88PA-2015-0847

13. SUPPLEMENTARY NOTES

14. ABSTRACT
Alcohol-to-Jet (ATJ) Synthetic Kerosene with Aromatics (SKA) fuels are produced by dehydrating and refining of alcohol feed stocks. An ATJ SKA fuel was developed by Swedish Biofuels AB. Through a cooperative agreement between Sweden and AFRL/RQTF, this ATJ SKA including standard Department of Defense jet fuel additives, in combination known as SB-8, was tested in a 90-day toxicity study with male and female Fischer 344 rats. Rats were exposed to 0, 200, 700, or 2000 mg/m^3 fuel in an aerosol/vapor mixture for six hours per day, five days per week. Aerosols represented 0.04 and 0.84 percent of the total average jet fuel concentration in the 700 or 2000 mg/m^3 exposure groups. No indications of changes in reproductive health were found when vaginal cytology and sperm parameters were examined. Neurobehavioral effects were limited to increased rearing activity in the 2000 mg/m^3 females (motor activity assay) and significantly decreased grooming among rats of the same group (functional observational battery). Hematological changes (including clotting and clinical chemistry) were limited to increased platelet counts in the 2000 mg/m^3 exposure group males. Minimal focal alveolar epithelial hyperplasia with increased alveolar macrophages was noted in some 2000 mg/m^3 male rats and one 2000 mg/m^3 female rat. Additional rats were included to test for genotoxicity by micronucleus formation. Neither bone marrow cell toxicity nor an increase in micronuclei was observed; SB-8 is not clastogenic. Inhalation of SB-8, alone or in a 50:50 blend with petroleum-derived JP-8, is unlikely to increase human health risks in the military workplace.

15. SUBJECT TERMS
Jet fuels, alternative fuels, synthetic kerosene with aromatics, JP-8, biobased/bio-based, toxicity/toxicology, alcohol-to-jet, inhalation toxicity, 90-day study

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
U					D. R. Mattie
a. REPORT	b. ABSTRACT	c. THIS PAGE	SAR	176	19b. TELEPONE NUMBER (*Include area code)*
U	U	U			NA

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI-Std Z39-18

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PREFACE

Funding for this project was provided through the Air Force Research Laboratory, Fuels and Energy Branch (AFRL/RQTF) from the Office of the Secretary of Defense (OSD) Coalition Warfare Program (CWP). This study supports an international agreement between AFRL/RQTF and Sweden. This research was conducted under contract FA8650-10-2-6062 with the Henry M. Jackson Foundation for the Advancement of Military Medicine (HJF) or under Navy work unit number H1272 under the management of Naval Medical Research Unit - Dayton (NAMRU-D). The program manager for the HJF contract was David R. Mattie, PhD (711 HPW/RHDJ), who was also the technical manager for this project. The technical manager for NAMRU-D was Karen L. Mumy, PhD.

The 90-day study protocol was designed to be in general compliance with the U.S. Environmental Protection Agency (U.S. EPA) Office of Prevention, Pesticides and Toxic Substances (OPPTS) Guideline 870.3465: 90-Day Inhalation Toxicity (1998a) and the Organisation for Economic Co-operation and Development (OECD) Guidelines for Testing of Chemicals, Section 413, Subchronic Inhalation Toxicity: 90-day Study (OECD, 2009). The neurotoxicity portion of the study follows OPPTS 870.6200 Neurotoxicity Screening Battery (U.S. EPA, 1998b) and the genotoxicity portion follows OPPTS 870.5395 Mammalian Erythrocyte Micronucleus Test (U.S. EPA, 1996).

This study was not performed in a Good Laboratory Practice (GLP) Standards certified laboratory, and therefore there is no certification of compliance with GLP regulations (40 CFR Part 792). However, this study was conducted with an effort to follow the spirit, intent and purpose of GLP requirements.

The 90-day inhalation study with neurotoxicity testing and genotoxicity assay was approved by the Wright-Patterson Air Force Base (AFB) Installation Animal Care and Use Committee (IACUC) as protocol number F-WA-2012-0139-A. The study was conducted in a facility accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC), International, in accordance with the Guide for the Care and Use of Laboratory Animals (NRC, 2011). The study was performed in compliance with DODI 3216.1.

The authors would like to acknowledge LTC Karyn Armstrong (Attending Veterinarian) and the Wright-Patterson AFB Vivarium staff of the U.S. Air Force 711 Human Performance Wing (711 HPW/RHDV), who provided the daily efforts necessary for animal husbandry and animal observations. The authors also wish to thank Anthony Barnett and Joseph Brune (Oak Ridge Institute for Science and Education (ORISE), Wright-Patterson AFB) for compilation of inhalation data.

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1.0 SUMMARY

Alcohol-to-jet (ATJ) Synthetic Kerosene with Aromatics (SKA) fuels are produced by the dehydration and refining of alcohol feed stocks. The alcohol is generated from non-renewable (petrochemical sources) or renewable (fermented plant sugars) sources. The U.S. Air Force is investigating ATJ SKA fuels for use in 50:50 blends with the conventional petroleum-derived Jet Propulsion-8 (JP-8). Use of commercial names and products does not constitute endorsement of these products by the U.S. Air Force or U.S. Navy.

Part of this investigation was to determine the toxicological risk of using ATJ SKA fuels. As part of an international agreement between Sweden and AFRL/RQTF, an ATJ SKA fuel developed by Swedish Biofuels AB (Stockholm, Sweden) was tested in a 90-day toxicity study in rats. This fuel was the second formulation developed by Swedish Biofuels and has been termed "SB ATJ SKA (new)" to distinguish it from the prior formulation. Produced from lignocellulosic feedstocks (grain crops or wood) and designed by Swedish Biofuels as a drop-in replacement for petrochemically derived JP-8, SB-8 contains a minimum of 70 percent branched paraffins and 15 percent aromatic compounds (SB, 2015). Toxicity testing in fuels includes the addition of a standard additive package required for JP-8. The fuel, with additives, was assigned a POSF log book number of 8452 provided by the Air Force Research Laboratory Fuels and Energy Branch (AFRL/RQTF) located at Wright-Patterson Air Force Base (AFB) OH, formerly known as the Air Force Wright Aeronautical Laboratories (AFWAL/POSF). For brevity, the test fuel with additives is referred to as SB-8.

SB-8 was used in a 90-day inhalation study with male and female Fischer 344 rats (10 rats per sex per concentration). Rats were exposed to 0, 200, 700, or 2000 mg/m^3 fuel in an aerosol/vapor mixture for 6 hours per day, five days per week for 70 exposure days, per standard test guidelines (OECD, 2009; U.S. EPA, 1998a). Average exposure concentrations were measured by Fourier transform infrared spectrophotometry (aerosol + vapor) and were found to be 0.2 ± 0.2, 204 ± 3, 706 ± 8, and 2016 ± 12 mg/m^3 (± SD) in the control, low, medium, and high concentration groups, respectively. Average aerosol concentrations were measured using gravimetric filters and were 0.3 ± 0.2 and 17 ± 7 mg/m^3 (± SD), for the medium, and high concentration exposure chambers, respectively; aerosols represented 0.04 (medium), and 0.84 (high) percent of the total average jet fuel concentration.

Body weights were not statistically different between exposed and control rats. Percent body weight gain, measured weekly during the study, was decreased in the 700 mg/m^3 exposure group males at specific intermediate time points, but there were no statistical differences by the end of the study. As there was also a lack of dose-response trend, these statistical differences were not considered biologically significant. Similarly, food consumption among treated groups was different on some weeks during the study; as these differences did not follow a dose-response trend and did not persist throughout the study; these differences were not deemed biologically significant. As an indicator of reproductive health, vaginal cytology was assessed during week 9 of exposure and sperm count, motility and morphology were evaluated after the full 70 days of exposure; no abnormalities were found for males or females across the exposure groups. Motor activity assessments and the functional observational battery (FOB) were performed during weeks 11 and 12 of exposure, respectively, to assess potential neurobehavioral effects, per U.S.

EPA guidelines (1998b). No significant differences were found between exposure groups among the male rats for motor activity or FOB. There was an increased incidence of total rearing actions among female rats over the 60-minute observation period. For all functional observations, no concentration related effects were reported for the female rats with the exception of fur appearance, where fur condition varied between exposure groups and the female rats exposed to 700 and 2000 mg/m^3 exhibited more incidences of urine stains in a dose dependent manner.

Following the final exposure, rats were euthanized in accordance with AVMA guidelines (AVMA, 2007). No exposure-related differences were observed in clinical chemistry endpoints or clotting parameters. Hematological changes in exposed male rats were limited to increased platelet counts; counts increased with exposure concentration and were significantly different from the control counts in the 2000 mg/m^3 exposure group. None of the standard hematological parameters were significantly different from the control values in female rats. Kidneys were analyzed for α_{2u}-globulin, a protein that produces hyaline droplets in renal tubular cells of male rats following hydrocarbon exposure. Renal tubule tumors have been seen in male rats exposed to hydrocarbons for one year and monitored for up to two years (Bruner *et al.*, 1993). Predictably, α_{2u}-globulin levels increased significantly in male rats with increased fuel exposure; all exposed male rats had protein levels significantly higher than the control group. This commonly observed effect in male rats with exposure to jet fuels is generally referred to as hydrocarbon nephropathy. Organ weights in exposed animals at necropsy were not different from controls. Histopathological changes were limited to kidneys and lungs. Minimal focal alveolar epithelial hyperplasia with increased alveolar macrophages was noted in some 2000 mg/m^3 male rats and one female rat of the same exposure group. Early stage chronic progressive glomerulonephropathy (CPG) was observed in nearly all rats and is an age-related disease common in F344 rats; however, the severity of findings increased with the higher fuel concentrations in male rats due to the hydrocarbon nephropathy. This protein-overload disease is generally considered to be male rat specific and not pertinent to human health (Borghoff *et al.*, 1990; Hard *et al.*, 1993). Overall, the 90-day study with SB-8 resulted in a minimal hyperplasic response in the alveoli for rats in the 2000 mg/m^3 exposure group, and some mild behavioral changes (urine staining of fur due to decreased grooming) in female rats.

In conjunction with the 90-day inhalation study, additional rats (5 rats per sex) were included at each concentration of SB-8 fuel and received the same aerosol/vapor mixture for 6 hours per day, five days per week for two weeks (a total of 10 exposure days) to test for genotoxicity by micronucleus formation (OECD, 1997; U.S. EPA 1996). Following euthanasia in accordance with AVMA guidelines (AVMA, 2007), bone marrow samples were collected from femurs, stained and examined for polychromatic erythrocytes, normochromatic erythrocytes and micronuclei per flow cytometry. Neither bone marrow cell toxicity nor an increase in micronuclei was observed; SB-8 is not clastogenic.

In conclusion, occupational inhalation exposures to SB-8, alone or in a 50:50 blend with petroleum-derived JP-8, is unlikely to increase human health risks in the military workplace.

2.0 INTRODUCTION

Alcohol-to-jet (ATJ) Synthetic Kerosene with Aromatics (SKA) fuels are produced by the dehydration and refining of alcohol feed stocks. The alcohol is generated from non-renewable (petrochemical sources) or renewable (fermented plant sugars) sources. The U.S. Air Force is investigating ATJ SKA fuels for use in a 50:50 blend with the conventional petroleum-derived Jet Propulsion-8 (JP-8). Crucial to approval of this alternative fuel is the determination that the fuel is not more toxic than the currently used petroleum-derived JP-8.

As part of an international agreement between Sweden and the Air Force Research Laboratory Fuels and Energy Branch (AFRL/RQTF) located at Wright-Patterson Air Force Base (AFB) OH, two ATJ SKA fuels produced by Swedish Biofuels AB (Stockholm) have been submitted for toxicity testing. Produced from lignocellulosic feedstocks (grain crops or wood), Swedish Biofuels (SB) jet fuels contain a minimum of 70 percent branched paraffins and 15 percent aromatic compounds (SB, 2015).

SB jet fuels are designated using POSF log book numbers provided by AFRL/RQTF (formerly known as the Air Force Wright Aeronautical Laboratories, AFWAL/POSF). Each fuel was tested following the addition of a standard additive package required for JP-8. Alternative fuels have two POSF numbers, one designating the fuel alone and one for the fuel plus additives. Use of commercial names and products does not constitute endorsement of these products by the U.S. Air Force, U.S. Navy, or U.S. Army.

Originally, SB fuel (dated 2010) contained solely trimethylbenzenes as their aromatic content; this fuel was designated SB ATJ SKA (old) (POSF 5668 (alone), 10234 with additives). A second fuel was formulated to be more similar to petroleum-derived JP-8. This fuel, denoted as SB ATJ SKA (new), was received in 2012 and again contained 15 percent aromatics, but the class was represented by several alkylbenzene components instead of a single compound and its isomers. SB-8 is designated as POSF 7633 (alone) and POSF 8452 (with additives). A comprehensive analysis of the fuel constituents is found in Sterner *et al.* (2014). Both fuels were tested for dermal irritation potential (Sterner *et al.*, 2014) and genotoxicity utilizing the Ames test (Mumy *et al.*, 2015). SB ATJ SKA (new) with additives (POSF 8452) was selected for the inhalation study; for brevity, this test material is referred to as SB-8 in this study.

2.1 Objective

The objective of this study was to assess the potential inhalation toxicity of the SB-8 fuel (SB ATJ SKA (new) with additives, POSF 8452) in Fischer 344 rats. To this end, whole body inhalation exposures were conducted per standard test guidelines (OECD, 2009; U.S. EPA, 1998a) for 6 hours/day, 5 days/week over a 90-day period (70 exposure days), at concentrations of 0 (control), 200, 700, or 2000 mg/m^3 SB-8. Aerosol and vapor exposures were present. Groups of ten males and ten females were exposed at each concentration composed of eight groups of five subjects for a total of 40 males and 40 females. Additional endpoints assessed were neurotoxicity, reproductive toxicity, and genotoxicity.

3.0 METHODS

This study was designed to assess the potential toxicity of SB-8 fuel when administered as an aerosol and vapor inhalation exposure to rats for 6 hours per day, 5 days per week over approximately 90 days, at concentrations of 0, 200, 700, and 2000 mg/m^3. Each exposure group consisted of ten male and ten female Fischer 344 rats; each exposure group had two replicates of five males and five females each (Table 1). The replicates were staggered by one day in the exposure schedule to accommodate necropsy at the end of exposures. Additionally, exposures accommodated holidays and the neurobehavioral testing schedule, which resulted in a total of 106 days from first exposure to last necropsy, with each replicate receiving 70 exposures. The study followed the U.S. Environmental Protection Agency (U.S. EPA) Office of Prevention, Pesticides, and Toxic Substances (OPPTS) Guideline 870.3465: 90-Day Inhalation Toxicity (1998a) and the Organisation for Economic Co-operation and Development (OECD) Guidelines for Testing of Chemicals, Section 413, Subchronic Inhalation Toxicity: 90-day Study (OECD, 2009).

Table 1. 90-Day Study Design

Group	Exposure Level	Number of Animals	
	mg/m^3	Males	Females
Control Replicate 1	0	5	5
Control Replicate 2		5	5
Low Replicate 1	200	5	5
Low Replicate 2		5	5
Intermediate Replicate 1	700	5	5
Intermediate Replicate 2		5	5
High Replicate 1	2000	5	5
High Replicate 2		5	5
	Total	40	40

Additionally, to assess the genotoxic potential of the fuel (see Section 3.13 Micronucleus Assay below), five males and five female F344 rats per exposure concentration were exposed for two weeks (10 days of exposure) to the SB-8 fuel, concurrent with the first two weeks of the 90-day exposure. Positive (cyclophosphamide) and negative (saline) control groups were assessed in the assay; control groups consisted of five male and five female rats in each group (Table 2). A nearly identical complete animal study protocol has been previously published as Appendix A of Sterner *et al.* (2015). Although minor differences exist (*e.g.*, the use of different whole body exposure chambers), the protocol methods remain essentially the same.

Table 2. Micronucleus Study Design

Group	Exposure Level	Number of Animals	
	mg/m^3	Males	Females
Control	0	5	5
Low	200	5	5
Intermediate	700	5	5
High	2000	5	5
Negative Control	saline	5	5
Positive Control	cyclophosphamide	5	5
	Total	30	30

3.1 Test Substance

The SB ATJ SKA (new) jet fuel (Swedish Biofuels AB, Stockholm) was supplied by the Air Force Research Laboratory Fuels and Energy Branch (AFRL/RQTF) at Wright Patterson AFB OH. An additive package consisting of chemicals normally added to JP-8 jet fuel was mixed with the fuel at the Fuels and Energy Branch facility; additives comprise less than 0.15 percent by weight. The combination of SB ATJ SKA (new) jet fuel with additives was designated as POSF log book number 8452 by the Fuels and Energy Branch and is referred to in this study as SB-8. Records regarding the receipt of the base SB ATJ SKA (new) fuel and additive package, and the POSF log book are maintained by the Fuels and Energy Branch. The fuel was stored under room temperature ambient conditions in a flame resistant cabinet.

Purity and stability data are maintained by the Fuels and Energy Branch. Table 3 summarizes the composition of SB ATJ SKA (new) fuel versus JP-8, as analyzed by comprehensive two-dimensional gas chromatography (GC x GC). The analysis of this fuel has been previously described in Sterner *et al.* (2014); the GC x GC method is detailed in Striebich *et al.* (2014).

Table 3. Summary Comprehensive Two-Dimensional Gas Chromatography Component Comparison of Test Substances

Fuel	JP-8	SB ATJ SKA (new)
POSF log book number*	4658	7633
AROMATICS		
Total Alkylbenzenes	13.69	10.47
Total Alkylnaphthalenes	1.76	<0.01
Total Cycloaromatics	5.79	1.71
Total Aromatics	**21.24**	**12.18**
ALIPHATICS		
Total iso-Paraffins	31.34	44.14
Total n-Paraffins	19.00	0.66
Total Cycloparaffins	28.42	43.00
Total Aliphatics	**78.76**	**87.80**
TOTAL	**100.00**	**99.98**

Note: Component values given in mass percent. *Component analysis was performed on the fuel (POSF 7633) prior to the addition of additives. Reprinted from Sterner *et al.* (2014).

3.2 Animals and Animal Husbandry

Animals were ordered from Charles River Laboratories (Kingston NY). The rats immediately entered a quarantine and acclimation period for 10 days. During this period, each animal was observed twice daily for mortality, morbidity, and changes in general appearance or behavior. Animals were same sex pair-housed in plastic, solid bottom cages.

During the week prior to start of exposures, the rats were acclimated to the stainless steel wire-mesh cages (Toxic Hazard Research Unit (THRU) cage units) by placing them individually into the cages for an increasing length of time (1, 2, 3, 4, and 6 hours) on successive days.

After random assignment to study groups, rats were housed individually to prevent ingestion of the jet fuel through peer grooming and to monitor individual food consumption. Control group rats were housed in a separate animal room from the exposed rats, to avoid inhalation exposure to any off-gassed fuel from the exposed rats. Tail tattoos were used to identify individual animals; a unique number was assigned to each animal by the Vivarium staff.

Animal housing room conditions were maintained at approximately 22 °C and 50 percent humidity, with a 12 hour light/dark cycle. Animals were fed a certified rodent diet (Formulab Diet Purina Lab Chow, PMI Nutrition, International, LLC, Brentwood MO), *ad libitum*, except during cage acclimation, exposure, and neurobehavioral testing outside the home cage. Rats were fasted the night prior to euthanasia and necropsy. Reverse osmosis purified municipal tap

water was available at all times, except during exposures and neurobehavioral assessments outside the home cage.

Rats were weighed the day after arrival and at randomization. Body weights were measured prior to each exposure session. Feed container weights were measured daily to provide food consumption measurements prior to food replenishment.

3.3 Exposure System

Rats were exposed via whole-body inhalation in THRU 690 L stainless steel and glass whole-body exposure chambers. Four chambers were utilized, one for each exposure group. Each chamber had a capacity of up to 32 rats held in THRU stainless steel wire mesh cage units; each chamber held up to four stainless steel wire mesh cage units and each cage unit individually housed up to eight rats. Individual housing allowed free flow of the test atmosphere and prevented rats from huddling together, which could reduce or filter exposure.

Air from the room was passed through a 95 percent high efficiency particulate air (HEPA) filter and distributed by a blower to the exposure chambers. The chambers were operated at a flow rate of approximately 144 L per minute to provide 12.5 air changes per hour, which exceeds the minimum guideline requirement of 10 air changes per hour. This chamber size and airflow rate was adequate to maintain an oxygen level that is at least 19 percent, the minimum required by the guidelines. Air leaving the chambers was pulled by a blower to the building exhaust flow system.

Inlet air flows were controlled by a manually operated gate valve. Air flow was measured at the inlet to each chamber using a mass flow monitor (Model HFM-200 MFM, Teledyne-Hastings Instruments, Pittsburgh PA) connected to a laminar flow element (Model HFM-200 LFE, Teledyne-Hastings Instruments). Each of the mass flow monitors were connected to a four-channel power supply (Model THPS-400-115, Teledyne-Hastings Instruments). The exposure period (6 hours) started when the compressed air and the fuel flow were applied to the nozzle.

Following exposure, chamber air flow was switched to clean room air. Animals remained in their respective chambers for approximately 30 minutes, in order to exhaust most of the fuel from the chamber. Rats in the control exposure group were removed from the chamber first and transferred to home cages in their separate animal housing room prior to the removal of any exposed rats. The test material-exposed rats were held in a different animal room from the control rats to minimize exposure of the control animals by off-gassing from the exposed rats.

Temperature and relative humidity were measured by a temperature/relative humidity probe (Model HF532WB6XD1XX, Model HC2-S, Rotronics Instruments, Inc., Hauppauge NY) located inside each exposure chamber. The target temperature was between 20 and 24° C (68 and 75° F) and the target relative humidity was between 30 and 70 percent.

3.4 Generation System

The fuel exposure was generated as a mixture of aerosol and vapor by pumping the liquid jet fuel into an air atomizing nozzle (Model SUJ1A with fluid cap 1650 and air cap 64, Spraying Systems Co., Wheaton IL). A liquid metering pump (Fluid Metering, Inc., Syosset NY) pumped liquid jet fuel from a glass bottle reservoir to the nozzle. Compressed instrument air at approximately 35 psi was supplied to the nozzle. The spray was directed through a large J-tube then into the inlet air stream to the exposure chamber. During exposure, the total flow rate of 144 L per minute was a combination of a clean air supply at approximately120 L per minute and the test substance flow rate of approximately 24 L per minute from the J-Tube generator (Wong *et al.,* 2013).

3.5 Fuel Concentration Measurements

A Fourier transform infrared spectrophotometer (FTIR, Model iS10, Thermo Scientific, Waltham MA) was used to monitor the concentration of jet fuel in each chamber. A sample of the chamber atmosphere was pulled through the FTIR spectrophotometer. The absorbance and converted concentration from the FTIR were recorded by a computer approximately every 20 seconds beginning prior to the scheduled exposure start time. Recording ended after the termination of the exposure. Concentration data for each exposure were selected from the recorded data based on the actual exposure start and stop times.

3.5.1 FTIR Calibration. The FTIR was calibrated using a closed loop system. Four FTIRs, two with short paths (2 meter) and two with long paths (10 meter) gas cells, were arranged in series with a metal bellows pump (MB-41, Metal Bellows, Sharon MA) , a filter unit, and a 10-gallon, stainless steel pressure vessel (Part No. 41665K32, McMaster-Carr, Aurora OH) which provided more total volume to the system. Known weights of jet fuel were injected into the system just prior to a filter unit, and allowed to recirculate until equilibrium was established between the volatile components and the non-volatile components at room temperature. Replicate, additive injections were made over a series of concentrations.

FTIR absorption measurements were recorded approximately every 20 seconds until the maximum absorption reading was reached and maintained for several minutes. Each recording was saved as a line in a text file, which was subsequently imported into Microsoft Excel® (Microsoft Corporation, Redmond WA) for plotting. A calibration curve of spectrophotometer response as a function of jet fuel concentration in milligrams per meter cubed (mg/m^3) was produced for each instrument, and the regression values were input into the macro program on that FTIR's computer. During exposure days, the FTIR recorded data three times per minute during the pre-exposure period, total exposure period (the time the animal was exposed) and post-exposure period.

3.5.2 Chamber Distribution. A chamber distribution test for the high dose chamber, for representative purposes, was completed by sampling at nine locations in the exposure chamber.

To check the uniformity of distribution, the chamber was modified with sampling lines which reached to the eight corners of the chamber and the center. All four cages were in place during the chamber distribution test. The generation system was operated to achieve the approximate target concentration. Samples were taken at one of the remaining eight locations alternating with the center location for a total of 17 samples: nine from the center and eight other individual locations (Wong *et al.*, 2013). The measured concentration at the standard sampling location at the center of the chamber provided an indication of the variability of concentration over time, while the measurements at the surrounding ports provided an indication of the variability of concentration on a spatial basis.

3.5.3 Aerosol Characterization. Aerosol mass concentration was measured weekly using gravimetric filters. Particle size distribution measurements were performed using a cascade impactor (7-stage, In-Tox Products, Moriarity NM). Particle size was measured approximately once weekly. Particle size was also monitored by an Aerodynamic Particle Sizer (APS) (Model 3321, TSI, Inc., Shoreview MN).

3.5.4 Nominal Concentration. Nominal concentration was calculated from the air flow rate through the chamber, the total generation time, and the mass of fuel consumed during the exposure. The reservoirs containing the jet fuel used by the generation system were weighed at the start of generation and at the end, after the exposure period, using an analytical balance. A flow rate of 144 L per minute and an exposure time of 360 minutes were used in the calculation.

3.6 Ophthalmologic Exam

Animals were given an ophthalmological exam to look for eye defects prior to the study. An ophthalmoscope was used in addition to a gross observation of the eyes. Following the study, all animals from the control and 2000 mg/m^3 groups were examined again. By the protocol, if ocular changes were found among the high exposure group animals, the remaining two exposure groups would have been examined as well.

3.7 Neurobehavioral Assessments

Neurobehavioral assessment is required by the 90-day study guidelines (U.S. EPA, 1998a) and is described in detail in OPPTS Guideline 870.6200: Neurotoxicity Screening Battery (U.S. EPA, 1998b). The neurobehavioral assessment consisted of motor activity measurements and the functional observational battery as described below.

3.7.1 Motor Activity. Motor activity (gross locomotor movements and exploratory behavior) were evaluated during the 11^{th} week of exposure. Animals were individually placed in clear plastic open fields measuring 16 x 16 x 15 inches (width x depth x height, respectively) with horizontal and vertical photobeam frames. The photocells were mounted 1-inch apart in frames

placed at ground level to detect horizontal movement and in an elevated frame to detect vertical rears, as well as differentiate small (stereotypic) movements from large movements.

Each individual animal was placed in the center of the open field and left uninterrupted for the duration of a 1-hour test session. Beam breaks were automatically recorded using a photobeam activity system and software from San Diego Instruments (San Diego CA). The following dependent measures were automatically recorded: distance traveled (cm), time spent active/time spent resting (seconds), average speed (cm/second), number of fine beam breaks (stereotypical), total number of rears, percentage of time in center versus perimeter, and total activity habituation over six 10-minute blocks.

Motor activity was measured in a room with white noise generated at 73 dB to mask/equalize ambient room levels of approximately 70 dB. Low illuminating light was standardized at 30 lux. Neither food nor water was provided during behavioral observations. Between each test, the open fields were washed with a solution of 10 percent ethanol to remove olfactory cues from the previous occupants.

3.7.2 Functional Observational Battery. A functional observational battery (FOB) evaluates signs of toxicity to the nervous system that may result in gross behavioral changes and functional deficits (U.S. EPA, 1998b). FOB evaluations were performed in the 12th week, during a day off from exposure in which the prior three or more consecutive days were exposure days. Animals from the first replicate of each exposure group were evaluated in the neurotoxicology observation room on the same day; the second replicate from each exposure group was tested the following day.

The FOB consists of non-invasive procedures designed to evaluate and document the absence or presence (with severity, if appropriate) of a predetermined set of behavioral and clinical signs. The first observations were made with the rat in its home cage; assessments included posture, tremors and spasms, and palpebral closure. The second set of observation were made during the removal of the rat from the cage and subsequent holding, including the rat's reactivity to handling, muscle tone, lacrimation, salivation, fur appearance including facial crust, breathing pattern, and any other clinically abnormal signs presented. Third, open field observations included arousal and general activity level, gait, body position, vocalization, tremor, spasm, unusual behaviors, and urination and defecation counts. Finally, minimally manipulative tests were performed, including:

- approach response: response to a blunt object approaching and stopping before the animal's nose,
- acoustic response: response to a hidden metallic click,
- tail pinch response: response to a pinch of the tail,
- visual placement: response of forelimb to grasp for a surface while being held by the observer,
- surface righting: righting response to being turned and briefly held on its back,
- hind leg splay: response to being dropped approximately 30 cm (12 inches). Hind legs were painted to mark the location of the hind legs upon landing,

- grip strength: force necessary to break the animal's grip on a wire mesh, and
- pupillary light reflex: pupil response to light.

Hind leg splay was not performed if the animal was judged too weak to support its weight when dropped or if the righting response was not displayed. FOB was performed in a room with white noise generated at 73 dB to mask/equalize ambient room levels of approximately 70 dB. Low illuminating light was standardized at 30 lux. Efforts were made to further control conditions such as temperature, humidity, odors, time of day, and environmental distractions, to avoid affecting behavior. Rats were assigned a temporary identification number using cage cards in order to keep FOB observers blind to the treatment group. Neither food nor water was provided during behavioral observations conducted outside the home cage.

3.8 Vaginal Cytology

Vaginal cytology was conducted on all female rats during the 9^{th} week of exposure. A vaginal lavage was performed on each female rat daily over a seven consecutive day period. Lavage was performed prior to exposure or at approximately the same time on non-exposure days. Approximately 25 μL of physiological saline was gently flushed into the vaginal opening and aspirated back into a pipette tip. The aspirate was placed a glass slide, the slide prepared, and then read using light microscopy.

The rat estrous cycle lasts approximately four to five days; its stages are characterized as proestrus, estrus, metestrus, and diestrus. Proestrus is indicated by a predominance of nucleated round epithelial cells in a vaginal lavage sample. Estrus is indicated by a predominance of irregularly shaped conified epithelial cells in which the nucleus is not well-defined or is absent. Metestrus is indicated by an approximately equal distribution of leukocytes, conified epithelial cells and nucleated round epithelial cells. Diestrus is indicated by a predominance of leukocytes.

3.9 Sperm Motility, Morphology, and Concentration

Immediately following the last exposure, animals were euthanized in accordance with current American Veterinary Medical Association (AVMA) guidelines (AVMA, 2007). Following euthanasia of male rats, the right epididymis was dissected and weighed. The cauda epididymis was then removed and submitted for sperm motility/morphology analyses. The right testes were frozen for count analysis. The left epididymis and testes were dissected and preserved in Bouin's solution for histopathology.

To determine sperm motility, the right cauda was placed in a petri dish containing M-199 media with Hank's Balanced Salts (catalog number 12350-039, Life Technologies, Carslbad CA). The cauda epididymis was then punctured and the sperm allowed to diffuse out. If needed, the sample of the sperm was diluted with additional M-199 media. An aliquot was analyzed for sperm motility using computer assisted sperm analysis (CASA) via proprietary software (IVOS, Hamilton Thorne, Inc., Beverly MA). Data were reported as the fraction of motile sperm. From

the petri dish, an aliquot was stored in 10 percent formalin, refrigerated, and used for later morphology analysis.

Testicular spermatid head counts were evaluated from the frozen right testes. The right testes were thawed and reweighed prior to homogenizing for sperm counts. Those samples were homogenized in buffer solution and analyzed on the IVOS sperm analyzer.

3.10 Necropsy

During euthanasia, terminal blood was collected via the caudal vena cava for hematology and clinical chemistry. For males, the right testicle and cauda epididymis were taken for sperm analysis, and the body necropsied for the remaining tissues. The necropsy included examination of the external surface and all orifices; the organs and tissues of the cranial, thoracic, abdominal and pelvic cavities and neck; and the remainder of the carcass. Pathology observations were conducted by a board certified veterinary pathologist. Wet weights of the liver, kidneys, adrenals, testes, epididymides, ovaries, uterus, thymus, spleen, brain, and heart were obtained after dissection from the exposure and control animals.

3.11 Clotting, Clinical Chemistry, and Hematology

Terminal blood samples were analyzed for clinical chemistry and hematology endpoints. Prothrombin time in plasma (PT-P) and international normalized ratio (INR) were determined using a blood clot analyzer (GEM PCL Plus, Instrumentation Laboratory, Lexington MA). Samples of whole blood with anticoagulant were examined using a blood analyzer (Hemavet 950, Drew Scientific, Dallas TX), while samples of serum were assessed using a chemistry analyzer (Vet Test 8008 and Vet Lyte, IDEXX Laboratories, Westbrook ME).

3.12 Measurement of α_{2u} Globulin Protein

Kidneys from male and female rats were utilized to quantify the amount of alpha-2-urinary (α_{2u})-globulin protein in kidney tissue. One-half of each kidney (left cut longitudinally, right cut transversely) was flash frozen and stored at -80 °C until analysis of the kidney homogenate using an enzyme-linked immunosorbent assay (ELISA) procedure.

3.13 Micronucleus Genotoxicity Assay

To assess the genotoxic potential of the fuel, five males and five female F344 rats per exposure concentration (see Table 2 above) were exposed for two weeks (ten exposures) to the SB-8 fuel (concurrent with the experiment described above). An added set of rats (five males and five females, not exposed to jet fuel) served as positive controls for micronucleus formation. A solution of cyclophosphamide (CP) in physiological saline was administered via intraperitoneal injection (40 mg/kg animal body weight) approximately 24 hours before euthanasia. To provide

negative controls and determine the background frequency of micronuclei, a final set of rats were given physiological saline by intraperitoneal injection (1 ml per 100 g bodyweight), approximately 24 hours before euthanasia.

All animals for this assay were euthanized in accordance with current AVMA guidelines (AVMA, 2007) and dissected to extract bone marrow from the femur. The bone marrow was analyzed for micronuclei by measuring the frequency of micronucleated cells by flow cytometry in approximately 20,000 reticulocytes from each animal. The percentage of reticulocytes and micronucleated reticulocytes were measured per animal.

3.14 Statistics

Statistical calculations were based on exposure group. SigmaPlot software (version 12.0, Systat Software, Inc., San Jose CA) was used for in-life data such as body weight, body weight gain, and food consumption. Post-mortem data such as hematology, coagulation, clinical chemistry, and organ weights were also evaluated using SigmaPlot.

Normality was tested using the Shapiro-Wilk test. Levene's test ($p < 0.01$) was performed to check for equal variance. Data for quantitative, continuous variables were compared for the exposure and control groups by one-way analysis of variance (ANOVA). If the ANOVA indicated statistical significance among experimental groups, the Holm-Sidak method was used to delineate which groups differ from the control group. The probability value of less than 0.05 was used as the critical level of significance for each statistical test.

When assumptions for parametric ANOVA were not met, Kruskal-Wallis or Wilcoxon Rank-sum nonparametric procedures were used. Additional exposure group comparisons of various test session activities were also performed. Incidence data was compared using the appropriate statistical test, generally Chi-Square test. Incidence data for selected FOB endpoints with ordered severity scores was analyzed for group differences using appropriate measures of association.

4.0 RESULTS

4.1 Exposure Conditions

4.1.1 Chamber Distribution. The concentration distribution was checked in the 2000 mg/m^3 exposure chamber prior to the start of exposures. The measured concentration at the standard sampling location at the center of the chamber provided an indication of the variability of concentration over time, while the measurements at the surrounding ports provided an indication of the variability of concentration on a spatial basis. The chamber distribution test results indicate that the variability of concentration in the chamber is less than 3 percent. The chamber distribution measurement table for the 2000 mg/m^3 chamber is found in Appendix A. To further

minimize any effects due to variability of concentration within the chamber, animals were placed in different cage locations over the course of the study.

4.1.2 Exposure Conditions. During each exposure day (from October 2, 2012 through January 15, 2013), fuel concentration and ambient (apparatus) temperature, humidity, air flow, and static pressure readings were monitored (Appendix A). The humidity, temperature, static pressure, and air flow remained at or near target exposure system levels. The study average temperatures were 22.2 ± 0.2, 22.2 ± 0.2, 22.9 ± 0.4, and 22.7 ± 0.2 °C, for the 0, 200, 700, and 2000 mg/m^3 chambers, respectively.

The SB-8 vapor concentrations were measured continuously by FTIR, and an average was recorded at the end of each exposure period for each chamber. The study average concentrations were 0.2 ± 0.2, 204 ± 3, 706 ± 8, and 2016 ± 12 mg/m^3 for the 0, 200, 700, and 2000 mg/m^3 chambers, respectively (Table 4). Nominal concentrations, based on the fuel used and the chamber air flow were 188 ± 4, 747 ± 22, and 2023 ± 47 mg/m^3 for the 200, 700, and 2000 mg/m^3 chambers, respectively. Analytical to nominal concentration ratios were calculated as 1.09, 0.95, and 1.00, respectively.

The aerosol mass concentration was measured in the mid and high dose chambers using gravimetric filters. The average aerosol concentrations were 0.3 ± 0.2 and 17 ± 7 mg/m^3 for the 700 and 2000 mg/m^3 chambers, respectively (Table 5). The aerosol fraction was 0.04 and 0.84 percent of the vapor concentration in the medium, and high concentration chambers, respectively, showing that as the fuel concentration increased the total fraction of aerosol droplets increased.

Both a cascade impactor and an aerodynamic particle sizer spectrometer were used to measure the particle size distribution. Measurements were made by sampling from a chamber during the course of the study. Using the cascade impactor data, the average mass median aerodynamic diameter and geometric standard deviation (MMAD (GSD)) of the aerosols were calculated as 1.38 (2.16) and 2.60 (1.90) µm for the medium, and high concentration chambers, respectively (Table 5). The average MMAD and GSD of the aerosols recorded by the APS were 0.60 (0.01), 0.63 (0.04), 0.61 (0.01), 0.65 (0.05), 0.72 (0.05) µm for room air, control, low, medium, and high concentration chambers, respectively (Table 5). Aerosols with particle size distributions between 1 and 4 µm are generally considered respirable in rodents.

Table 4. Inhalation Atmosphere Summary

			Control 0 mg/m^3	200 mg/m^3	700 mg/m^3	2000 mg/m^3
FTIR Vapor Concentration	(mg/m^3)	Mean	0.22	204	706	2016
		SD	0.21	3	8	12
		Min	-0.11	199	683	1978
		Max	0.79	218	723	2046
		Count	44	70	70	70
FTIR Nominal Concentration	(mg/m^3)	Mean	0.00	188	747	2023
		SD	0.00	4	22	47
		Min	0.00	179	721	1890
		Max	0.00	207	883	2103
		Count	70	70	70	70
Ratio of Vapor to Nominal Concentration	(%)	Mean	ND	109	95	100
		SD		2	2	3
		Min		101	81	95
		Max		113	98	107
		Count		70	71	71
Gravimetric Concentration	(mg/m^3)	Mean	ND	ND	0.26	17.0
		SD			0.16	7.1
		Min			0.02	6.8
		Max			0.56	36.3
		Count			12	27
Ratio of Gravimetric to Vapor Concentration	(%)	Mean	ND	ND	0.04	0.84
		SD				
		Min				
		Max				
		Count				

Notes: Max = maximum; Min = minimum; ND = no data collected; SD = standard deviation

Table 5. Test Atmosphere Particle Size Data Summary

			Room Air	0 mg/m^3	200 mg/m^3	700 mg/m^3	2000 mg/m^3
Aerosol Particle Size from APS	MMAD (µm)	Mean	0.60	0.63	0.61	0.65	0.72
		SD	0.01	0.04	0.01	0.05	0.05
		Min	0.58	0.59	0.59	0.61	0.63
		Max	0.61	0.77	0.62	0.90	0.83
		Count	29	29	29	29	29
Aerosol Particle Size from APS	GSD	Mean	1.23	1.41	1.21	1.30	1.38
		SD	0.07	0.18	0.06	0.08	0.010
		Min	1.10	1.16	1.14	1.19	1.19
		Max	1.34	2.02	1.39	1.60	1.55
		Count	29	29	29	29	29
Aerosol Particle Size from Cascade Impactor	MMAD (µm)	Mean	ND	ND	ND	1.38	2.60
		SD				-	0.29
		Min				-	2.29
		Max				-	3.43
		Count				1	16
Aerosol Particle Size from Cascade Impactor	GSD	Mean	ND	ND	ND	2.16	1.90
		SD				-	0.36
		Min				-	1.34
		Max				-	2.46
		Count				1	16

Notes: APS = aerodynamic particle sizer ; GSD = geometric standard deviation; Max = maximum; Min = minimum; MMAD = mass median aerodynamic diameter; ND = no data collected; SD = standard deviation

4.2 Clinical Observations

No animals died unexpectedly or required early euthanasia during this study. On each exposure day, general observations were recorded prior to loading the rats into the exposure chambers, and then immediately following unloading. Body weights also were recorded prior to loading. Common observations included occasional body weight losses that exceeded three percent of the previous day's weight, and crusty eyes. Reports of body weight changes were most prevalent among the control rats, while reporting of crusty eye increased with increased exposure concentrations, likely due to mild irritation from the fuel exposure. Detailed clinical observation tables can be found in Appendix B.

4.3 Body Weight Results

Individual body weight data may be found in Appendix B. All animals included in the 90-day study were within 20 percent of the mean weight for their sex prior to group assignment.

Statistical comparisons were made on a pre-exposure day, at the end of each study week, and on the final day prior to euthanasia. There were no statistical differences between male or female body weights over the course of the study (Figures 1 and 2). Percent body weight gain from the pre-exposure weight was calculated at the end of each study week or on the final day (Figures 3 and 4). Significant differences were seen between the 700 mg/m^3 and control male rat exposure groups in percent body weight gain on study weeks 6, 8, 9, 10, and 11. No significant differences were seen among the male 200 and 2000 mg/m^3 exposure groups or female exposure groups, when compared with their respective controls.

4.4 Food Consumption

Food consumption was measured by weighing food trays on a daily basis (week days) and calculating an average daily rate by week. Male and female food consumption rates are shown in Figures 5 and 6, respectively. Individual food consumption data are found in Appendix B. The males in the 200 mg/m^3 exposure groups ate significantly less food than the control group during five of the weeks; all treated males ate significantly less than the control rats in Weeks 2 and 10. Female rats did not differ greatly in the consumption pattern across exposure groups. Only in Weeks 2 and 10 did one group (2000 mg/m^3 exposure) eat a significantly lower amount than the female control rats.

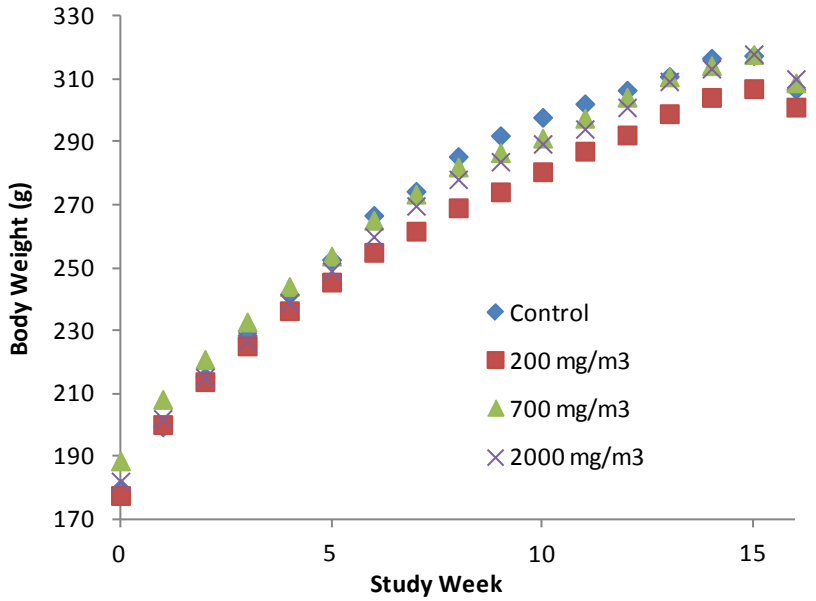

Figure 1. Average Body Weight in Male Rats. Weights were measured at the end of each study week. Study week 0 indicates the pre-exposure weight. The last time point indicates the final body weight following a night of fasting and prior to euthanasia.

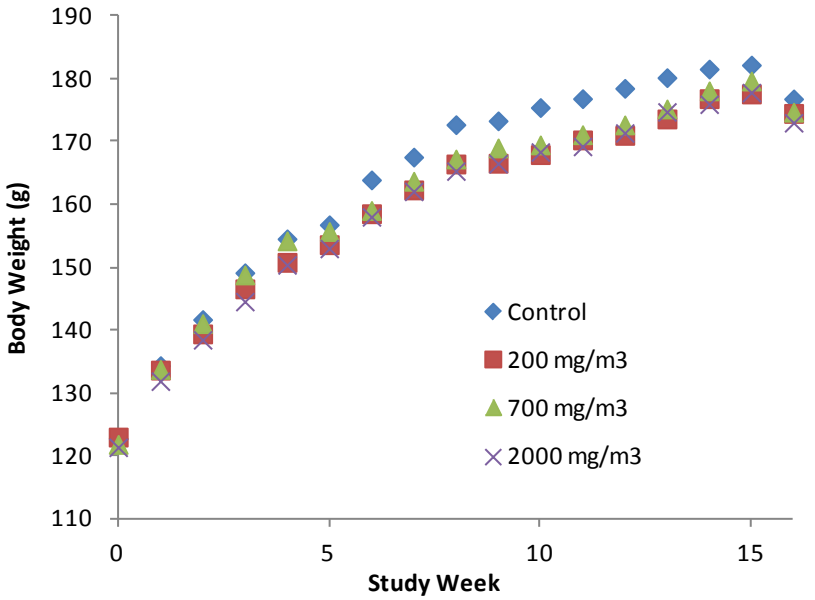

Figure 2. Average Body Weight in Female Rats. Weights were measured at the end of each study week. Study week 0 indicates the pre-exposure weight. The last time point indicates the final body weight following a night of fasting and prior to euthanasia.

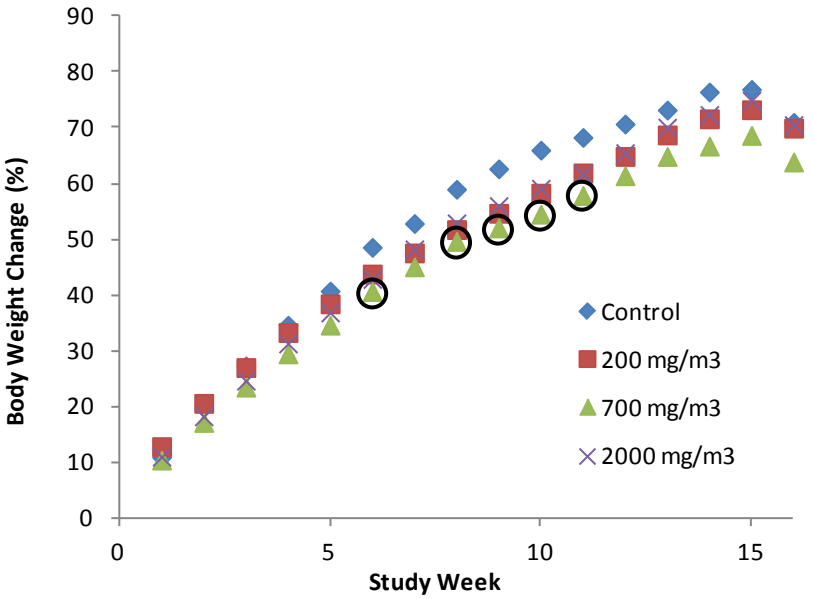

Figure 3. Average Percent Body Weight Change in Male Rats. Weights were measured at the end of each study week. The last time point indicates the final body weight following a night of fasting and prior to euthanasia. Circled data points are statistically different from control ($p < 0.05$).

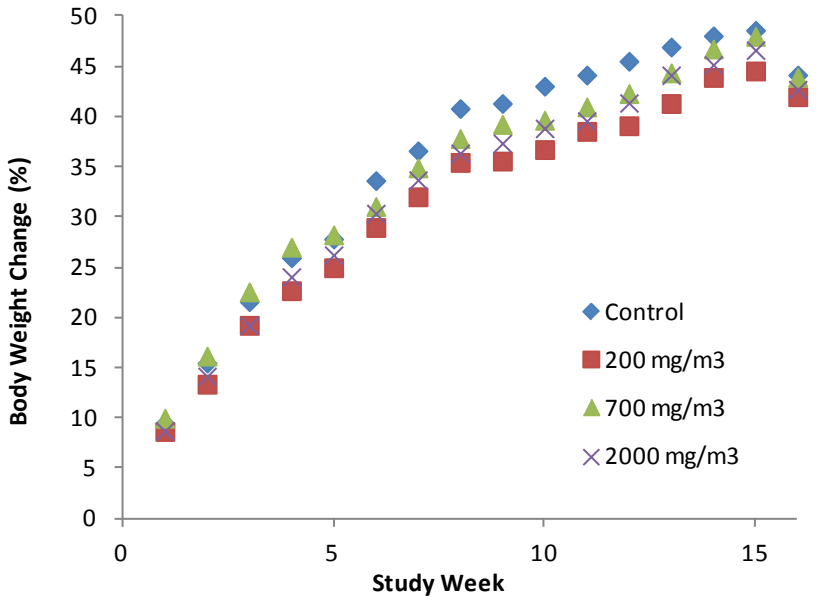

Figure 4. Average Percent Body Weight Change in Female Rats. Weights were measured at the end of each study week. The last time point indicates the final body weight following a night of fasting and prior to euthanasia.

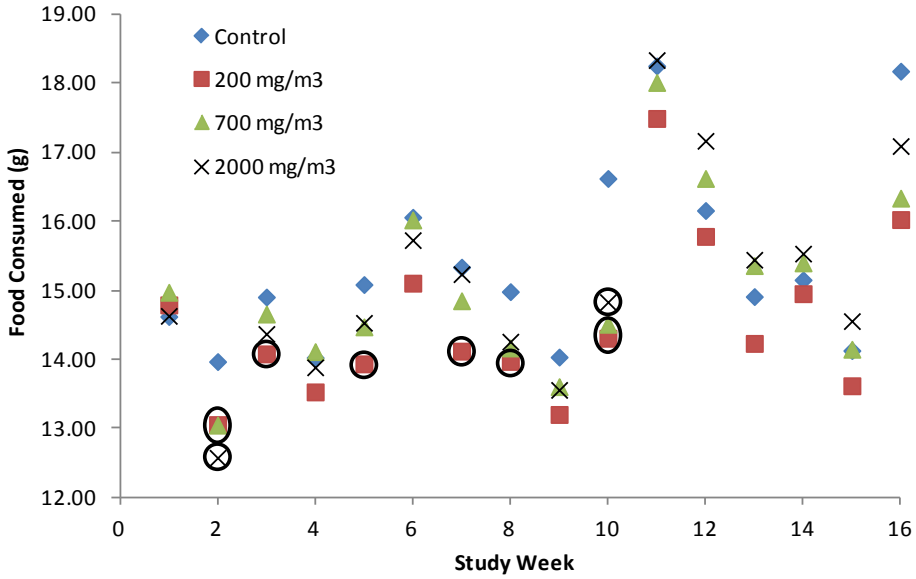

Figure 5. Average Weekly Food Consumption for Male Rats. Circled data points are significantly different from the control value for the respective week ($p<0.05$).

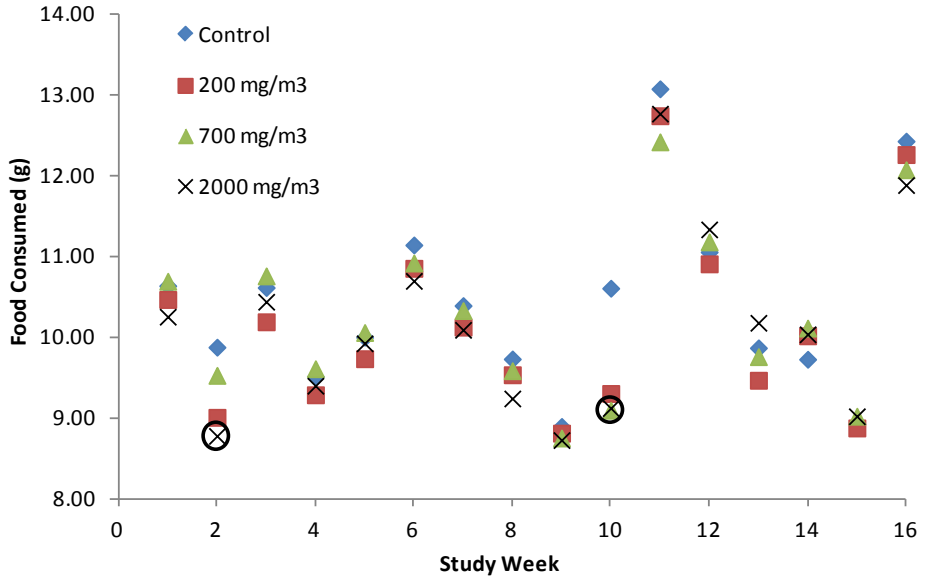

Figure 6. Average Weekly Food Consumption for Female Rats. The circled data points are significantly different from the control value for the respective week ($p<0.05$).

4.5 Ophthalmological Exams

Ophthalmologic examinations were conducted by the attending veterinarian, LTC Karyn Armstrong (711 HPW/RHDV, WPAFB OH) prior to the start of exposures. At the initial exam, three rats were excluded from the 90-day study due to pupil response problems; these animals were then assigned to a training protocol. Individual data are found in Appendix B.

At the start of the 14th exposure week, eye examinations were again performed on the control and 2000 mg/m^3 SB-8 group rats. All control rats' eyes were normal, while a single high exposure group rat was found to have mild inflammation of the eyelids. The eyes of 200 and 700 mg/m^3 exposure group rats were not examined as this single result was considered incidental.

4.6 Neurotoxicity Results

A summary of neurotoxicity tests for male and female rats exposed by inhalation to SB-8 fuel are shown in Table 6. Individual results are found in Appendix C.

Table 6. Summary Neurotoxicity Assay Results for Rats exposed to SB-8 Fuel

Neurotoxicity Assay	SB-8 Fuel Exposure Groups			
	Control	200 mg/m^3	700 mg/m^3	2000 mg/m^3
Motor Activity in Male Rats				
Total Activity (out of 3600 seconds)	1734 ± 80	1720 ± 96	1776 ± 140	1746 ± 119
Percent Time in Center vs. Perimeter	48.6 ± 2.0	53.0 ± 1.3	46.5 ± 2.6	43.3 ± 1.4
Stereotypical Activity (beam breaks)	366 ± 13	386 ± 26	431 ± 14	418 ± 23
Rears (beam breaks)	101 ± 8	110 ± 12	107 ± 15	136 ± 15
FOB Tests in Male Rats				
Rears (number in 120 seconds)	14.8 ± 1.1	17.7 ± 0.7	15.5 ± 2.1	17.3 ± 0.9
Stereo Grooming (number in 120 seconds)	3.7 ± 0.4	2.7 ± 0.5	3.6 ± 0.6	3.2 ± 0.4
Hind Splay (mm)	83.2 ± 7.6	88.2 ± 5.6	80.3 ± 3.6	79.9 ± 4.3
Forelimb Grip (kg to release)	0.60 ± 0.04	0.58 ± 0.03	0.60 ± 0.04	0.63 ± 0.04
Hindlimb Grip (kg to release)	0.46 ± 0.04	0.41 ± 0.03	0.44 ± 0.03	0.40 ± 0.02
Motor Activity in Female Rats				
Total Activity (out of 3600 seconds)	1696 ± 61	1861 ± 133	1616 ± 77	1936 ± 38
Percent Time in Center vs. Perimeter	41.2 ± 3.4	38.7 ± 3.2	35.3 ± 2.3	39.7 ± 1.3
Stereotypical Activity (beam breaks)	410 ± 25	396 ± 23	473 ± 19	462 ± 23
Rears (beam breaks)	99 ± 12	102 ± 13	104 ± 8	**149* ± 16**
FOB Tests in Female Rats				
Rears (number in 120 seconds)	17.0 ± 0.9	16.4 ± 1.7	17.8 ± 1.3	19.0 ± 1.3
Stereo Grooming (number in 120 seconds)	3.3 ± 0.5	4.0 ± 0.7	4.1 ± 0.7	3.1 ± 0.6
Hind Splay (mm)	66.8 ± 5.5	70.8 ± 3.9	69.1 ± 4.3	64.4 ± 2.9
Forelimb Grip (kg to release)	0.46 ± 0.03	0.44 ± 0.02	0.48 ± 0.02	0.48 ± 0.02
Hindlimb Grip (kg to release)	0.34 ± 0.02	0.36 ± 0.02	0.38 ± 0.02	0.34 ± 0.02

Note: Results indicate the group mean ± standard deviation. Bolded data indicate significant differences;* denotes significance at $p > 0.05$

4.6.1 Motor Activity. No significant differences for any of the motor activity measurements were detected between the males of any exposure groups when compared to the controls (Table 6 above). The 200 mg/m^3 males spent significantly more time in the center versus the perimeter of the arena, when compared to the 2000 mg/m^3 males only. Figure 7 shows the total activity habituation (beam breaks) in 10 minute blocks over 60 minutes for the male rats. There was an

expected main effect for block time with decreased activity over the 60 minutes but no main effect for exposure group or interaction for exposure group and time block.

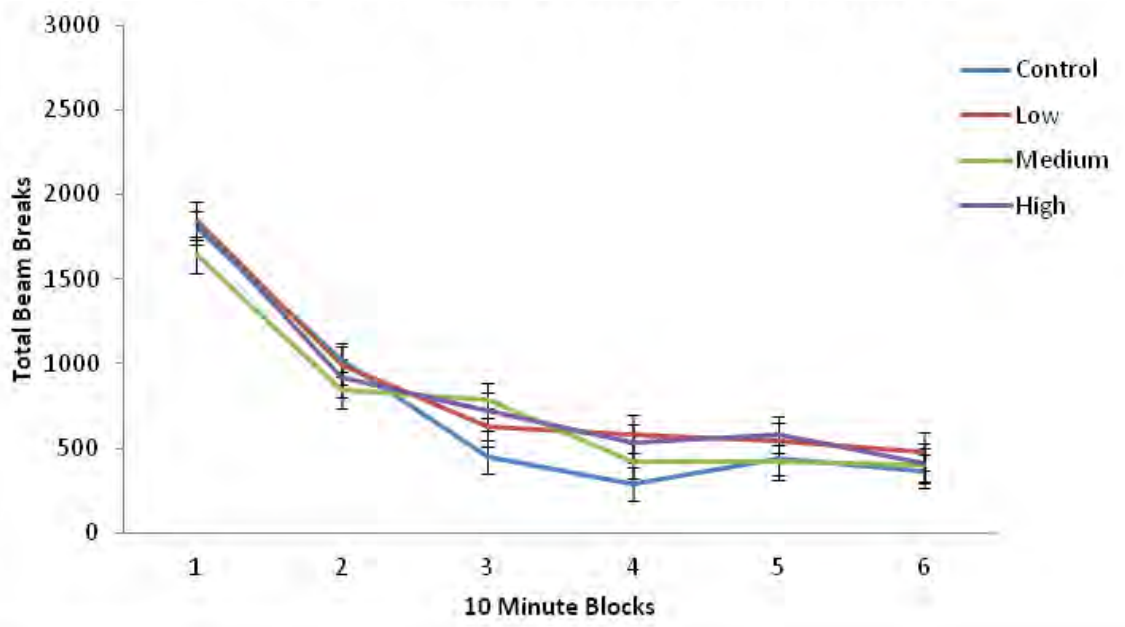

Figure 7. Motor Activity for Male Rats Exposed to SB-8 Fuel. Colored lines indicate group average; bars indicate standard deviation. Low = 200 mg/m^3; Medium = 700 mg/m^3; High = 2000 mg/m^3

No significant differences between exposure groups were detected for the females for any of the motor activity measurements with the exception of total number of rears (Table 6), where the 2000 mg/m^3 exposure group females were significantly more active than the controls (Figure 8). Figure 9 shows the total activity habituation (beam breaks) in 10 minute blocks over 60 minutes for the female rats. The expected habituation effect is clearly shown.

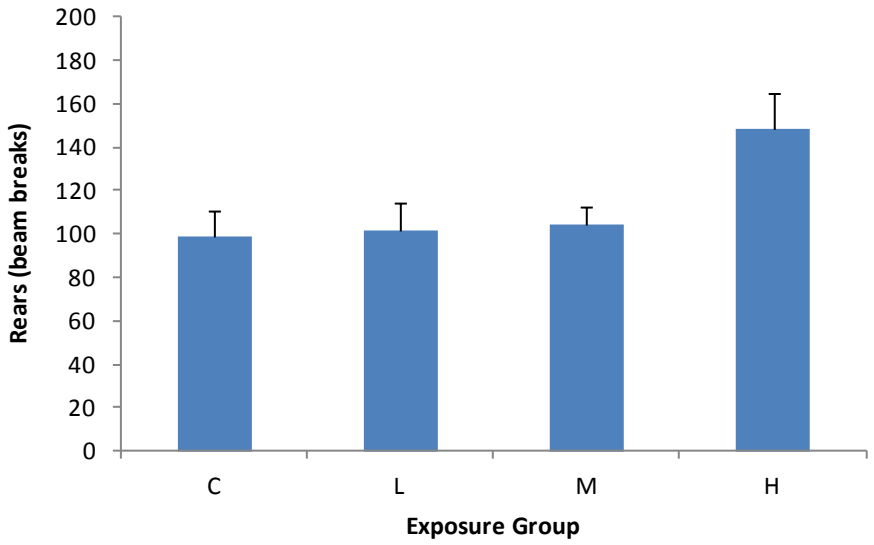

Figure 8. Rear Count for Female Rats Exposed to SB-8 Fuel. Bars indicate group average with standard deviation. C = control; L = 200 mg/m^3; M = 700 mg/m^3; H = 2000 mg/m^3

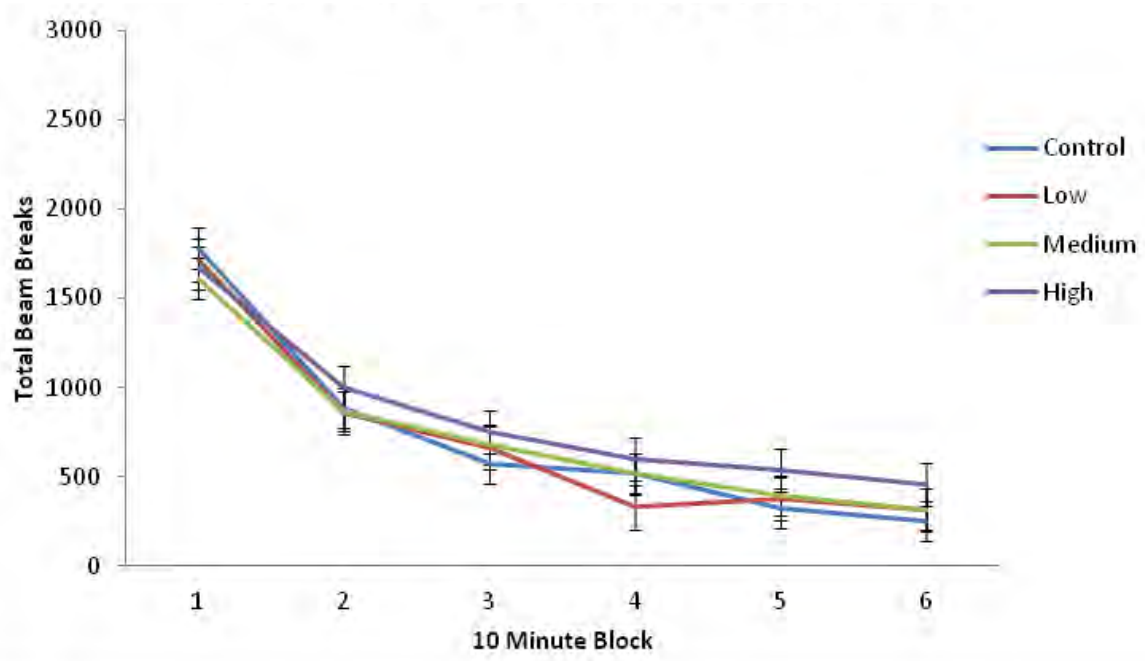

Figure 9. Motor Activity for Female Rats Exposed to SB-8 Fuel. Colored lines indicate group average; bars indicate standard deviation. Low = 200 mg/m^3; Medium = 700 mg/m^3; High = 2000 mg/m^3

4.6.2 Functional Observational Battery. For male rats, all FOB observations (cage side, open field, and manipulation tests) showed no dose related effects. Results for rears, stereotypical

grooming bouts, hind limb splay, and forelimb and hindlimb grip strengths are shown in Table 6 (above).

Open field and manipulation tests results for the female rats showed no dose related effects. Numeric results for rears, stereotypical grooming bouts, hind limb splay, and forelimb and hindlimb grip strengths are shown in Table 6 (above). The only effect in cage side observations was the fur appearance, where the occurrence of urine stains varied between exposure groups. Figure 10 shows the increase of urine stains with the increase in exposure level, with the 2000 mg/m^3 rats exhibiting significantly more stains than the controls (Chi-square = 9.829 with 3 degrees of freedom; P = 0.003).

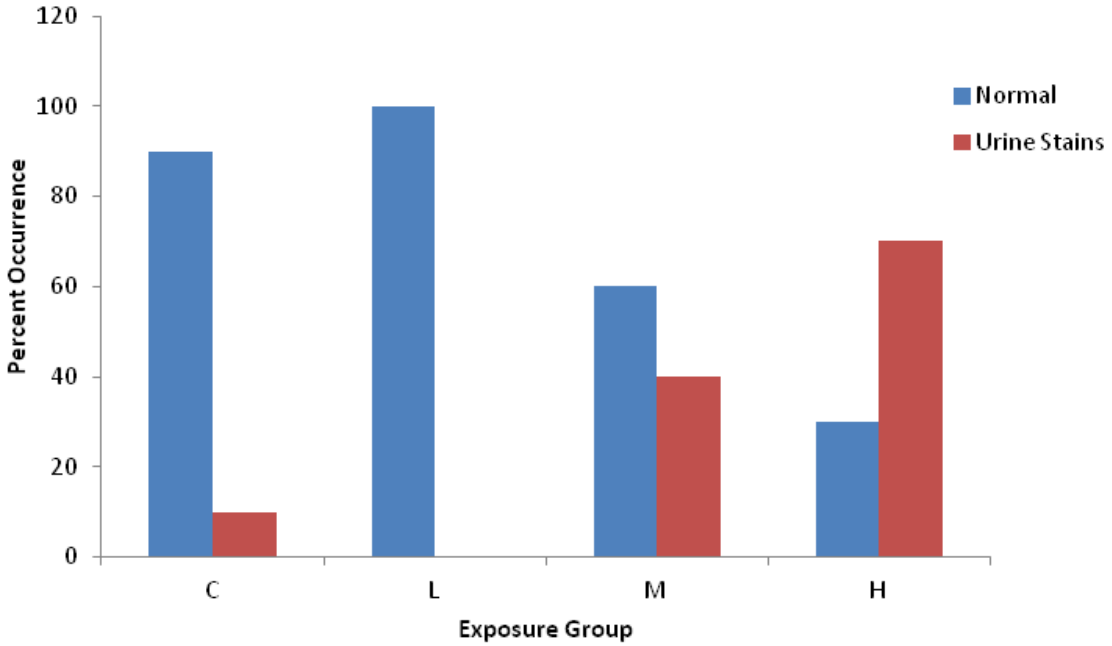

Figure 10. FOB Urine Stain Incidence for Female Rats Exposed to SB-8 Fuel. Percent occurrence of normal appearance or urine stained fur in female rats.

4.7 Vaginal Cytology

The vaginal lavage and cytology identified the predominant cell type present each day over a five-day span. The cell types were used to categorize each portion of the cycle: proestrus, estrus, metestrus, and diestrus. All of the exposed female rats appeared to be progressing through the cycle, regardless of exposure to the SB-8 jet fuel at any concentration. No statistically significant differences were found between any of the groups. Individual vaginal cytology data are found in Appendix D.

4.8 Sperm Parameters

Sperm counts, percent overall motility, and the percent of rapidly motile sperm were evaluated immediately following euthanasia and were not statistically different between exposure groups. Similarly, the number of cells evaluated in morphological testing, the percent normal, the number of sperm with abnormal heads, and the number with abnormal tails were also not different among exposed animals, when compared with the control rats. Individual data are found in Appendix E.

4.9 Gross Pathology

A table of gross pathology observations and necropsy notes is located in Appendix F. One repeated observation was fluid in the uterus; this observation occurred twice in the control group, once in the 200 mg/m^3 group, and twice in the 2000 mg/m^3 group. As this condition occurred without a dose-response pattern, it was not considered to be related to the exposures.

4.10 Organ Weights

Organs were weighed at necropsy. The average weight and standard deviation by exposure group were compiled for each organ system for both male and female rats (Tables 7 and 8). Organ weight to body weight ratios were calculated and presented in each table. Individual data tables are located in Appendix F. Organ weights and organ weight ratios were not different from controls in any exposure group.

Table 7. Average Organ Weights for Male Rats at Necropsy

Organ		Exposure Group			
		Control	200 mg/m^3	700 mg/m^3	2000 mg/m^3
Body Weight	Average (g)	306.87	301.23	308.96	310.16
	SD (g)	16.41	21.04	21.12	11.02
Spleen	Average (g)	0.63	0.61	0.63	0.65
	SD (g)	0.04	0.05	0.05	0.05
	% BW (mean)	0.20	0.20	0.20	0.21
	% BW (SD)	0.01	0.01	0.01	0.02
Heart	Average (g)	0.86	0.82	0.87	0.86
	SD (g)	0.09	0.06	0.09	0.09
	% BW (mean)	0.28	0.27	0.28	0.28
	% BW (SD)	0.02	0.01	0.03	0.02
Thymus	Average (g)	0.20	0.21	0.23	0.21
	SD (g)	0.04	0.04	0.06	0.05
	% BW (mean)	0.07	0.07	0.07	0.07
	% BW (SD)	0.02	0.01	0.02	0.02
Brain	Average (g)	1.89	1.86	1.90	1.87
	SD (g)	0.06	0.02	0.04	0.07
	% BW (mean)	0.62	0.62	0.62	0.60
	% BW (SD)	0.03	0.04	0.03	0.02
Right Kidney	Average (g)	1.00	0.99	1.03	1.00
	SD (g)	0.05	0.07	0.06	0.03
	% BW (mean)	0.32	0.33	0.33	0.32
	% BW (SD)	0.01	0.02	0.01	0.01
Left Kidney	Average (g)	0.99	0.99	1.02	1.06
	SD (g)	0.06	0.07	0.09	0.06
	% BW (mean)	0.32	0.33	0.33	0.34
	% BW (SD)	0.02	0.02	0.02	0.02
Adrenal Glands	Average (g)	0.04	0.05	0.05	0.06
	SD (g)	0.01	0.01	0.01	0.02
	% BW (mean)	0.01	0.02	0.02	0.02
	% BW (SD)	0.00	0.00	0.00	0.01
Liver	Average (g)	9.38	8.87	9.54	9.79
	SD (g)	0.89	0.75	0.87	0.34
	% BW (mean)	3.05	2.94	3.08	3.16
	% BW (SD)	0.18	0.18	0.13	0.14
Right Epididymis	Average (g)	0.24	0.22	0.24	0.23
	SD (g)	0.01	0.02	0.03	0.02
	% BW (mean)	0.08	0.07	0.08	0.08
	% BW (SD)	0.00	0.01	0.01	0.00
Right Testicle	Average (g)	1.54	1.49[a]	1.52	1.54
	SD (g)	0.07	0.09[a]	0.05	0.08
	% BW (mean)	0.50	0.44[a]	0.49	0.50
	% BW (SD)	0.02	0.03[a]	0.03	0.02
Left Epididymis	Average (g)	0.49	0.47	0.48	0.48
	SD (g)	0.04	0.06	0.04	0.03
	% BW (mean)	0.16	0.16	0.15	0.16
	% BW (SD)	0.01	0.02	0.01	0.01
Left Testicle	Average (g)	1.57	1.51	1.55	1.56
	SD (g)	0.07	0.17	0.08	0.06
	% BW (mean)	0.51	0.50	0.50	0.50
	% BW (SD)	0.02	0.06	0.04	0.01

Note: [a]Value based on n=9: missing 1 original data value

Table 8. Average Organ Weights for Female Rats at Necropsy

Organ		Exposure Group			
		Control	200 mg/m^3	700 mg/m^3	2000 mg/m^3
Body Weight	Average (g)	176.83	174.53	174.73	173.04
	SD (g)	9.31	8.27	7.30	6.95
Spleen	Average (g)	0.47	0.46	0.47	0.45
	SD (g)	0.04	0.03	0.03	0.04
	% BW (mean)	0.26	0.27	0.27	0.26
	% BW (SD)	0.02	0.02	0.01	0.02
Heart	Average (g)	0.55	0.56	0.55	0.54
	SD (g)	0.03	0.05	0.05	0.05
	% BW (mean)	0.31	0.32	0.31	0.31
	% BW (SD)	0.02	0.03	0.03	0.02
Thymus	Average (g)	0.19	0.20	0.20	0.19
	SD (g)	0.03	0.03	0.04	0.04
	% BW (mean)	0.11	0.12	0.11	0.11
	% BW (SD)	0.02	0.02	0.03	0.02
Brain	Average (g)	1.77	1.79	1.76	1.76
	SD (g)	0.05	0.05	0.05	0.05
	% BW (mean)	1.00	1.03	1.01	1.02
	% BW (SD)	0.06	0.03	0.04	0.04
Right Kidney	Average (g)	0.59	0.59	0.61	0.61
	SD (g)	0.04	0.04	0.04	0.04
	% BW (mean)	0.34	0.34	0.35	0.35
	% BW (SD)	0.02	0.02	0.01	0.03
Left Kidney	Average (g)	0.61	0.61	0.64	0.60
	SD (g)	0.05	0.03	0.06	0.04
	% BW (mean)	0.35	0.35	0.36	0.35
	% BW (SD)	0.03	0.02	0.03	0.01
Adrenal Glands	Average (g)	0.05	0.06	0.05	0.05
	SD (g)	0.02	0.02	0.01	0.01
	% BW (mean)	0.03	0.03	0.03	0.03
	% BW (SD)	0.01	0.01	0.00	0.01
Liver	Average (g)	4.70	4.83	5.00	4.95[a]
	SD (g)	0.30	0.30	0.39	0.32[a]
	% BW (mean)	2.66	2.76	2.86	2.86[a]
	% BW (SD)	0.10	0.09	0.13	0.15[a]
Uterus & Ovaries	Average (g)	0.74	0.71	0.62	0.76
	SD (g)	0.26	0.25	0.19	0.25
	% BW (mean)	0.42	0.40	0.36	0.44
	% BW (SD)	0.14	0.14	0.10	0.14
Uterus	Average (g)	0.64	0.59	0.53	0.66
	SD (g)	0.27	0.25	0.19	0.26
	% BW (mean)	0.36	0.34	0.30	0.38
	% BW (SD)	0.15	0.14	0.11	0.15
Ovaries	Average (g)	0.10	0.12	0.10	0.10
	SD (g)	0.01	0.03	0.02	0.02
	% BW (mean)	0.06	0.07	0.06	0.06
	% BW (SD)	0.01	0.02	0.01	0.01

Note: [a]Value based on n=9: missing 1 original data value

4.11 Pathology

Tissues were collected at necropsy and preserved in formalin. The tissues were embedded in paraffin, cut into 5 µm slices, and stained with hematoxylin and eosin. Tissues were then shipped to LTC Deidre Stoffregen (DVM, PhD, DACVP) for histopathology. The full pathology report can be found in Appendix G.

No lesions were found in the nasal cavity or larynx in exposed rats. Two incidences of minimal tracheal mineralization seen in the 2000 mg/m^3 exposure group males are considered a common background lesions found among research rats. In the lungs, four incidences of minimal Type II pneumocyte hyperplasia were noted among male rats in the highest exposure group; this lesion was not present in the females of this group or any other exposure group rats. Alveolar histiocytosis (Figure 11) leading to alveolar hyperplasia (Figure 12) occurred among three males and one female of the 2000 mg/m^3 exposure group; again this lesion was not present in any other exposure group.

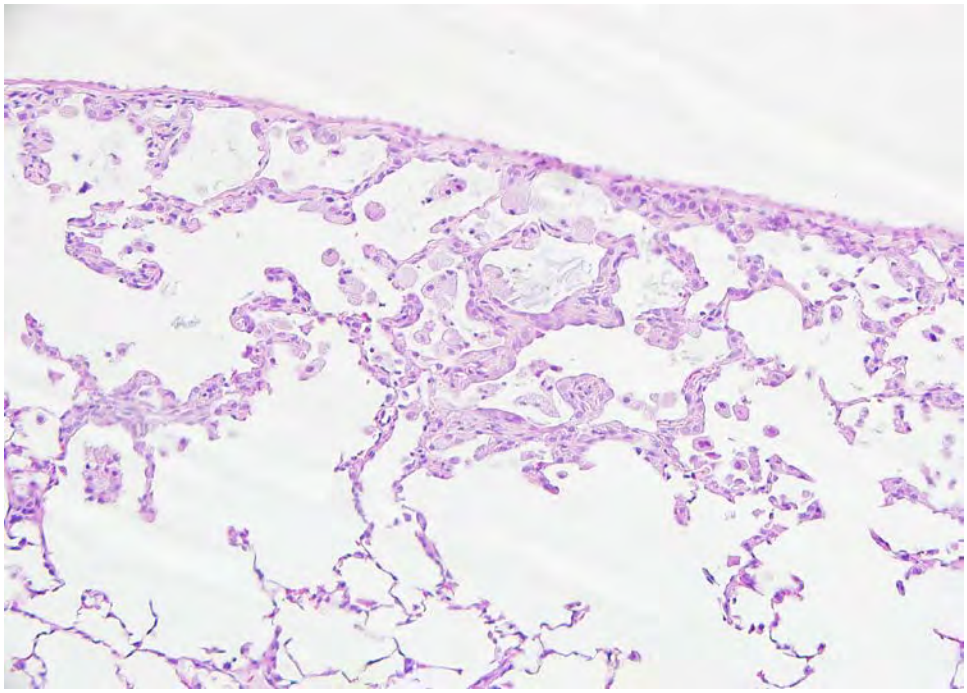

Figure 11. Alveolar Epithelial Hyperplasia with Alveolar Histiocytosis. Photo from Animal 61 exposed for 90-days to 2000 mg/m^3 SB-8 alternative jet fuel.

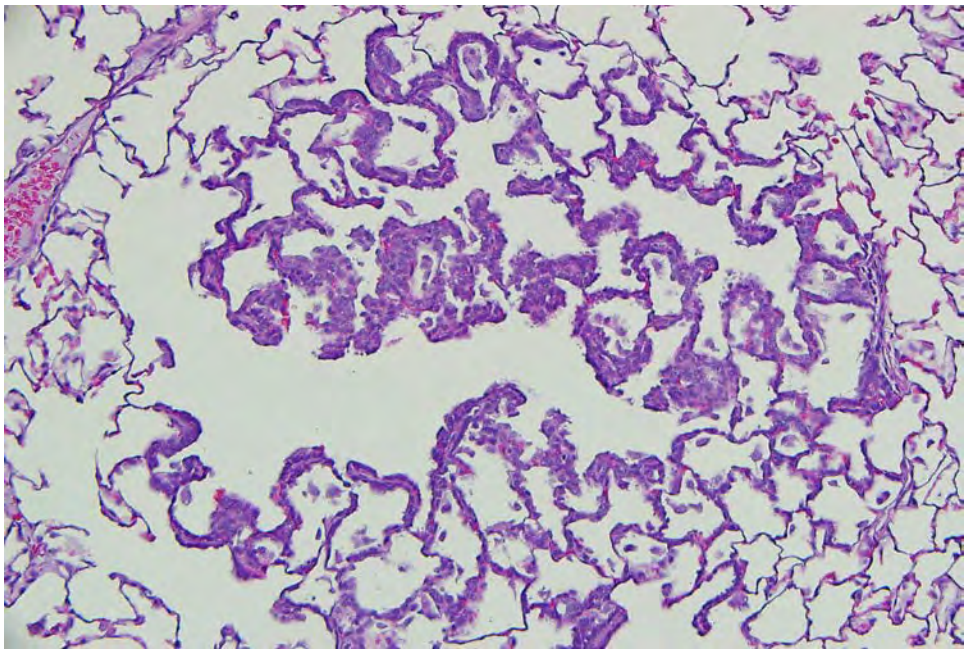

Figure 12. Alveolar Epithelial Hyperplasia with Alveolar Macrophages. Photo from Animal 77 exposed for 90-days to 2000 mg/m^3 SB-8 alternative jet fuel.

Early stage chronic progressive glomerulonephropathy (CPG) was observed in all rats and is an age-related disease common in F344 rats. The severity of findings increased with increased fuel exposure in male rats due to hydrocarbon nephropathy.

Mild Harderian gland inflammation was observed among the 2000 mg/m^3 exposure group rats (both sexes) as compared to controls. This effect is attributed to slightly increased ocular irritation caused by 70 exposures to the test material.

Lesions observed in the cardiac, nervous, gastrointestinal, liver, male and female reproductive, and endocrine systems are normal and common in aging rats and seen in both control and 2000 mg/m^3 exposure group rats; these effects are considered to be background lesions not related to the test article.

4.12 Blood Clotting, Hematology, and Clinical Chemistry

Blood clotting parameters prothrombin time in plasma and international normalized ratio were measured in blood sampled without the addition of anti-coagulant. Exposed rats did not differ from control rats in their ability to form blood clots. Individual blood clotting data for male and female rats can be found in Appendix H.

Samples of whole blood with anticoagulant were examined for hematological parameters. Platelet counts were increased significantly in the 2000 mg/m^3 exposure group (Table 9). All other male rat and all female rat hematological parameters (Table 10) did not differ from

controls. Control hematological parameter values fell within normal and historical ranges. Individual hematology data for male and female rats can be found in Appendix H.

Table 9. Hematology Parameter Values for Male Rats exposed 90-Days to SB-8 Fuel

Parameter Abbreviation, Definition (units)		Exposure Group Values (mean ± standard deviation)			
		Control	**200 mg/m^3**	**[a]700 mg/m^3**	**[b]2000 mg/m^3**
WBC	White blood cells (cells/µL)	8.21 ± 1.04	7.36 ± 1.39	8.04 ± 1.03	7.93 ± 1.15
NE#	Neutrophils (cells/µL)	2.44 ± 0.39	2.06 ± 0.44	2.38 ± 0.37	2.16 ± 0.27
LY#	Lymphocytes (cells/µL)	5.03 ± 0.91	4.70 ± 0.93	4.92 ± 0.76	5.12 ± 0.91
MO#	Monocytes (cells/µL)	0.71 ± 0.17	0.58 ± 0.13	0.73 ± 0.25	0.64 ± 0.16
EO#	Eosinophils (cells/µL)	0.018 ± 0.014	0.015 ± 0.012	0.012 ± 0.017	0.015 ± 0.009
BA#	Basophils (cells/µL)	0.007 ± 0.009	0.008 ± 0.012	0.004 ± 0.007	0.001 ± 0.002
NE%	Neutrophils (%)	29.9 ± 4.7	27.9 ± 2.2	29.6 ± 3.3	27.3 ± 2.4
LY%	Lymphocytes (%)	61.1 ± 6.1	63.8 ± 2.9	61.1 ± 5.0	64.3 ± 4.0
MO%	Monocytes (%)	8.67 ± 1.91	7.98 ± 1.67	9.05 ± 2.96	8.15 ± 1.89
EO%	Eosinophils (%)	0.21 ± 0.14	0.23 ± 0.22	0.16 ± 0.22	0.19 ± 0.11
BA%	Basophils (%)	0.09 ± 0.09	0.11 ± 0.17	0.05 ± 0.07	0.03 ± 0.03
RBC	Red blood cells (cells/µL)	9.35 ± 0.26	9.27 ± 0.41	9.04 ± 0.39	9.05 ± 0.27
Hb	Hemoglobin (g/dL)	17.1 ± 0.6	16.8 ± 0.8	16.6 ± 0.7	16.3 ± 0.5
HCT	Hematocrit (%)	50.5 ± 1.3	50.3 ± 2.0	48.8 ± 1.8	49.3 ± 1.2
MCV	Mean corpuscular volume (fL/cell)	54.0 ± 0.6	54.3 ± 0.9	54.0 ± 0.5	54.5 ± 0.8
MCH	Mean corpuscular hemoglobin (pg/cell)	18.3 ± 0.5	18.1 ± 0.5	18.4 ± 0.3	18.0 ± 0.3
MCHC	Mean corpuscular hemoglobin concentration (g/dL)	33.9 ± 1.0	33.3 ± 1.3	34.1 ± 0.6	33.1 ± 0.7
RDW	Red cell distribution width (fL/cell)	16.0 ± 0.5	16.0 ± 0.4	16.1 ± 0.4	16.2 ± 0.4
PLT	Platelets(cells/µL)	628 ± 92	671 ± 82	684 ± 35	**705* ± 26**
MPV	Mean platelet volume (fL/cell)	7.12 ± 0.33	7.11 ± 0.23	7.08 ± 0.16	7.01 ± 0.12

Note: Bolded data indicate significant differences; *Different from control group ($p<0.05$); [a]n = 9; [b]n=8

Table 10. Hematology Parameter Values for Female Rats exposed 90-Days to SB-8 Fuel

Parameter Abbreviation, Definition (units)		Exposure Group Values (mean ± standard deviation)			
		[b]Control	[a]200 mg/m^3	[b]700 mg/m^3	[a]2000 mg/m^3
WBC	White blood cells (cells/µL)	6.64 ± 1.40	6.11 ± 1.29	6.22 ± 1.47	6.36 ± 1.25
NE#	Neutrophils (cells/µL)	1.43 ± 0.18	1.50 ± 0.56	1.33 ± 0.50	1.45 ± 0.33
LY#	Lymphocytes (cells/µL)	4.55 ± 1.15	3.92 ± 0.71	4.35 ± 1.07	4.13 ± 0.77
MO#	Monocytes (cells/µL)	0.65 ± 0.22	0.67 ± 0.35	0.53 ± 0.20	0.76 ± 0.51
EO#	Eosinophils (cells/µL)	0.006 ± 0.009	0.008 ± 0.008	0.007 ± 0.008	0.007 ± 0.005
BA#	Basophils (cells/µL)	0.001 ± 0.002	0.002 ± 0.004	0.004 ± 0.006	0.004 ± 0.007
NE%	Neutrophils (%)	22.0 ± 3.0	24.2 ± 4.6	21.1 ± 4.7	23.1 ± 4.2
LY%	Lymphocytes (%)	68.1 ± 5.1	64.9 ± 7.8	70.0 ± 7.2	65.5 ± 6.6
MO%	Monocytes (%)	9.83 ± 3.27	10.74 ± 5.38	8.68 ± 3.35	11.23 ± 5.75
EO%	Eosinophils (%)	0.103 ± 0.121	0.128 ± 0.090	0.144 ± 0.122	0.118 ± 0.081
BA%	Basophils (%)	0.021 ± 0.023	0.046 ± 0.055	0.080 ± 0.086	0.095 ± 0.105
RBC	Red blood cells (cells/µL)	8.35 ± 0.31	8.26 ± 0.21	8.41 ± 0.27	8.33 ± 0.29
Hb	Hemoglobin (g/dL)	16.2 ± 0.6	16.2 ± 0.7	16.5 ± 0.4	16.3 ± 0.6
HCT	Hematocrit (%)	49.5 ± 1.7	49.0 ± 1.1	50.0 ± 1.5	49.6 ± 1.6
MCV	Mean corpuscular volume (fL/cell)	59.2 ± 0.6	59.3 ± 0.6	59.5 ± 0.5	59.6 ± 0.6
MCH	Mean corpuscular hemoglobin (pg/cell)	19.4 ± 0.5	19.6 ± 0.5	19.7 ± 0.4	19.7 ± 0.6
MCHC	Mean corpuscular hemoglobin concentration (g/dL)	32.7 ± 0.8	33.1 ± 1.0	33.1 ± 0.8	32.9 ± 0.9
RDW	Red cell distribution width (fL/cell)	14.4 ± 0.3	14.4 ± 0.3	14.4 ± 0.3	14.5 ± 0.4
PLT	Platelets(cells/µL)	730 ± 63	676 ± 39	619 ± 205	704 ± 31
MPV	Mean platelet volume (fL/cell)	6.98 ± 0.29	6.88 ± 0.12	7.26 ± 1.19	6.91 ± 0.14

Note: [a]n = 9; [b]n=8

Serum samples were analyzed for clinical chemistry endpoints. No significant differences were found in any clinical chemistry analytes between exposed male or female rats and control males or females. Female rats in the 700 mg/m^3 exposure group had significantly higher cholesterol as compared to females in the 2000 mg/m^3 group; no other statistically significant differences were

detected among any of the female rat group pairings or the male rat group pairings. Individual clinical chemistry data for male and female rats can be found in Appendix H.

4.13 α_{2u}-Globulin

The protein α_{2u}-globulin was measured in kidney samples for both female and male rats. See Appendix I for individual animal results. Levels in female kidney samples were more than two orders of magnitude lower than in males. The α_{2u}-globulin concentrations found in the female exposed groups were not significantly different from the female control group. The level of α_{2u}-globulin found in male rat kidneys increased with increased exposure to the fuel. Concentrations in all exposed animals were statistically higher than the control concentrations (Table 11).

Table 11. α_{2u}-Globulin Concentrations in Rats Exposed 90-days to SB-8 Fuel

Sex	Exposure Groups			
	Control	**200 mg/m^3**	**700 mg/m^3**	**2000 mg/m^3**
Male	36.587 ± 7.810	**56.837*** **± 21.314**	**61.418*** **± 18.005**	**73.922*** **± 18.547**
Female	0.178 ± 0.073	0.193 ± 0.070	0.246 ± 0.077	0.205 ± 0.124

Note: Values are mean (µg α_{2u}-globulin/mg tissue) ± standard deviation; Bolded data indicate significant differences; *Values are statistically different from control ($p < 0.05$).

4.14 Micronuclei Assessment

Following a two-week exposure to SB-8 fuel, rats showed no significant difference in the percentage of reticulocytes compared with air-exposed controls (Table 12). The percent of reticulocytes decreased in the positive control (cyclophosphamide) group, as compared to the vehicle control; the results were significantly different in a one-way ANOVA.

Conversely, the percentage of micronucleated reticulocytes increased significantly in the positive control group, indicating genotoxicity (Table 12). No significant differences were found between the air-exposed controls and the SP-8 exposure groups. Individual micronucleus assay data can be found in Appendix J.

Table 12. Micronucleus Data in Rats Exposed Two Weeks to SB-8 Fuel

	Exposure Groups				Assay Control Group	
	Control (0 mg/m^3)	200 mg/m^3	700 mg/m^3	2000 mg/m^3	Vehicle (saline)	Cyclo-phosphamide
% Reticulocytes	21.23 ± 6.46	21.07 ± 5.56	28.30 ± 8.04	25.96 ± 6.51	24.75 ± 8.89	**17.92* ± 5.99**
% Micronucleated Reticulocytes	0.12 ± 0.06	0.08 ± 0.08	0.09 ± 0.02	0.16 ± 0.08	0.15 ± 0.06	**0.72** 0.65**

Note: Values are mean ± standard deviation; Bolded data indicate significant differences; *Values are statistically different from relevant control ($p < 0.05$) using a one-way ANOVA; **Values are significantly different from relevant control ($p < 0.05$) using a two-way ANOVA

5.0 DISCUSSION

Neither male nor female rats exposed to SB-8 fuel for 90-days displayed significant body weight differences when compared to controls on a weekly basis during exposure. Significant decreases in percent gain were observed among the 700 mg/m^3 exposure group males as compared to the control males during 5 of the 15 weeks. Percent gains for the 200 and 2000 mg/m^3 exposed males and the exposed females were not different from their respective controls at any time point. The observed differences were found to be a function of averages and not biologically significant. At the pre-exposure time point, the 700 mg/m^3 exposure group was the heaviest group with the tightest standard deviation, while the control group average weight was nearly 10 g lighter. Due to being heavier at the beginning of the exposure, this group's weight gain was not as high as the control group gain at select time points, even though the overall weights were not different from each other at any time point.

The males in the 200 mg/m^3 exposure group consumed significantly less food than the control rats for 6 of the 15 weeks. During two of the weeks (Weeks 2 and 10), all exposed male rats consumed, on average, significantly less food than the controls. Similarly, during weeks 2 and 10, the female rats in the 2000 mg/m^3 exposure group also consumed less than their respective controls. As body weights were not significantly different and there is no dose-response trend observed, the decrease in food consumption at specific time points is not considered biologically significant.

Historically, a dose-dependent decrease in bodyweight is common in animals exposed to high fuel concentrations. Male rats exposed to 500 or 1000 mg/m^3 JP-8 vapor (23 hours/day, continuous exposure, 90 days) weighed 4.9 or 8.1 percent less than the control male rats, respectively (Mattie *et al.*, 1991); female rat weights in this study were not affected. Rats exposed to alternative jet fuels in other 90-day studies also had reduced bodyweights. In the 2000 mg/m^3 exposure group for hydroprocessed esters and fatty acids from a camelina feedstock (HEFA-C) synthetic paraffinic kerosene (SPK), average male body weights decreased by approximately 5 percent, and female body weights decreased by 3 percent (Wong *et al.*, 2013). Rats exposed to 2000 mg/m^3 Fischer-Tropsch (FT) SPK jet fuel were lighter by 12 percent in the males and 5 percent in females (Mattie *et al.*, 2011a). Another ATJ fuel (Gevo (bio) ATJ SPK), also resulted in no significant effect on bodyweight (Sterner *et al.*, 2015). The lack of effect on body weight produced by these ATJ fuels in 90-day inhalation exposures may indicate an even

milder general effect when compared to the inhalation of petroleum-based jet fuels or synthetics produced by different processes.

Decreased food consumption was noted particularly in male rats exposed to 200 mg/m^3 SB -8. Mattie *et al.* (2011a) found an association between increased inhaled FT SPK fuel exposure for 90-days and decreased food consumption; however, this decrease was associated with decreased bodyweight, which was not a factor in the current study. Rats exposed in the HEFA-C SPK 90-day study (Wong *et al.*, 2013) ate a statistically similar amount as compared to the study control group. Interestingly, a non-dose-dependent increase in food consumption was observed in the Gevo (bio) ATJ SPK study (Sterner *et al.*, 2015). Without a concurrent effect on body weight, the dose independent sporadic decreased food consumption is of questionable biological relevance to toxicity.

Upon ophthalmological examination, one 2000 mg/m^3 SB-8 exposed rat was found to have eyelid inflammation. As the only observation, this finding was considered incidental; therefore, SB-8 was found to have no ophthalmological effect. Outside of random incidence of porphyrin secretion (porphyrin is a red-colored lacrimal secretion from the Harderian gland, and may be associated with general stress to the animal (Heywood, 1982)), no ophthalmic effects have been reported from exposure to other alternative fuels (Mattie *et al.*, 2011a; Sterner *et al.*, 2015; Wong *et al.*, 2013).

Animals were assessed for neurobehavioral function near the end of the 90-day exposure period (Table 6). Motor activity was measured during the 11th week of exposure and a FOB was performed during the 12th week. No changes in either motor activity or FOB results were observed for male rats. In the motor activity test, female rats exposed to 2000 mg/m^3 SB-8 ATJ SPK fuel exhibited significantly more rearing behavior across the duration of the test (60 minutes). Many of these same high exposure female rats failed to groom themselves as regularly, which resulted in more urine stains on the fur during the FOB exam (Figure 10). These neurobehavioral effects are very similar to those seen with the Gevo (bio) ATJ SPK fuel, where the high exposure females displayed greater total activity during the motor activity assessment and increased urine stains in the FOB (Sterner *et al.*, 2015). The consistent effect of decreased grooming in the females may indicate that the females are more sensitive to the taste of ATJ fuels.

Minor but opposite neurobehavioral findings have been reported during a 90-day inhalation study with synthetic jet fuels produced by other chemical processes. Male rats exposed to 2000 mg/m^3 FT SPK fuel showed a reduction in total activity. Female rats of the same group displayed reduced initial exploratory activity. FOB findings were limited to reduced rearing behavior in females exposed to 2000 mg/m^3 FT SPK fuel (Mattie *et al.*, 2011a). In contrast, there were no significant observations relatable to exposure to HEFA-C fuel in either motor activity measurements or the FOB (Wong *et al.*, 2013).

Although multiple neurobehavioral studies have been performed to determine JP-8 effects, none were identical to the motor activity and FOB assessments performed in this study. Changes in behavioral response were observed in two studies where rats were exposed to 0, 500, or 1000 mg/m^3 JP-8 for 6 hours/day 5 days a week for 6 weeks. When animals were subjected to

different operant tasks with varying levels of complexity, the low and high exposure groups scored the same as control animals on all tests except for the most complex tasks. In these two operant tests, group differences emerged; low dose animals demonstrated better performance than high dose animals while neither group performed differently from controls (Ritchie *et al.*, 2001). In a second study using the same exposure methods, animals were tested in a large battery of neurobehavioral tasks. No exposure group differences were found in acoustic startle responses, forelimb grip strength, nociception, social interaction, the forced swim test, spontaneous locomotor activity, passive avoidance or Morris water maze performance. However, differences were found in a test for behavioral sensitization. The appetitive stimulus approach sensitization assay measures the time an animal spends proximal to an appetitive stimulus versus a neutral stimulus. Animals exposed to JP-8 spent more time than control animals investigating the appetitive stimulus, suggesting behavioral sensitization and altered neural pathways related to the dopaminergic system (Rossi *et al.*, 2001). Overall, only two very specific neurobehavioral effects of JP-8 vapor were seen after exposure in adult rats.

Reproductive endpoints in this 90-day study indicated no differences between the SB-8 ATJ SPK exposed animals and controls. Kerosene range jet fuels have yet to show any reproductive abnormalities in these endpoints (sperm parameters and vaginal cytology) or other reproductive studies. Mattie *et al.* (2011a), Wong *et al.* (2013), and Sterner *et al.* (2015) assessed FT, HEFA-C SPK, and Gevo (bio) ATJ SPK fuels in exactly the same manner, with identical results. Petroleum-derived JP-8 was assessed in two reproductive studies performed as part of a 90-day oral investigation of JP-8 in rats (Mattie *et al.*, 1995) and reported later (Mattie *et al.*, 2000). In the first study, male rats were given 0, 750, 1500, or 3000 mg/kg neat JP-8 daily by gavage for 70 days prior to mating with naïve females to assess fertility and sperm parameters. After 70 days of dosing, body weights in the 3000 mg/kg group were over 30 percent lower than control weights; however, there were no significant changes for pregnancy rate, gestation length, or sperm parameters as compared to control values. In the second reproductive study, general toxicity, fertility and reproductive endpoints were assessed in female rats dosed with neat JP-8 (0, 325, 750, or 1500 mg/kg) daily by gavage for a total of 21 weeks (90-days plus mating with naïve males, gestation, and lactation). Results of the general toxicity endpoints revealed a significant dose-dependent decrease in body weights of the female rats. Pup weight decreased with increasing dose, likely related to maternal body weight decreases. Offspring from the 1500 mg/kg dosed females were statistically and biologically significantly lower in weight on postnatal days 4 through 21. There were no statistically significant changes from control values for gestation length, pregnancy rate, and numbers of pups per litter (Mattie *et al.*, 2000).

Rats were euthanized in accordance with AVMA guidelines (AVMA, 2007) the day following the last exposure to SB-8 fuel. Gross pathology observations were few and not related to fuel exposure. This is consistent with Gevo (bio) ATJ SPK (Sterner *et al.*, 2015), HEFA-C SPK (Wong *et al.*, 2013), FT SPK (Mattie *et al.*, 2011a), and JP-8 exposures (Mattie *et al.*, 1991, 1995).

Organ weights and organ to bodyweight ratios were also evaluated during necropsy. No significant differences were seen in either parameter between exposed and control rats. In comparison, some significant changes were seen among rats exposed to the Gevo (bio) ATJ SPK, including changes in male spleen and liver weights. However, these changes were not

dose-related and so were assumed to be due to random biological variability (Sterner *et al.*, 2015). No biologically relevant changes in organ weight were seen in the HEFA-C SPK fuel 90-day study (Wong *et al.*, 2013). Organ weight differences seen at the high dose in the SPK study were correlated with body weight decreases and not considered to be a direct effect from the fuel (Mattie *et al.*, 2011a). JP-8 also did not produce changes in organ weights after exposure continuously for 90-days except in the male rat kidneys, where there was a significant increase in hyaline droplet formation (Mattie *et al.*, 1991).

Histopathological changes were limited to kidneys and lungs. Minimal focal alveolar epithelial hyperplasia with increased alveolar macrophages was noted in some 2000 mg/m^3 male rats and one female rat of the same exposure group. Other synthetic fuel exposures have resulted in alveolar alterations. Lung inflammatory infiltrates were recorded among the 2000 mg/m^3 exposure group in the Gevo (bio) ATJ SPK 90-day study (Sterner *et al.*, 2015). Epithelial hyperplasia and lung inflammatory cell infiltration were observed in the FT SPK study 2000 mg/m^3 exposure group (Mattie *et al.*, 2011a).

Although alveolar changes have been noted previously, nasal region alterations are far more common in jet fuel exposures. Respiratory epithelial lesions reported in the Gevo (bio) ATJ SPK study were associated with irritation response, while mild to minimal lesions were present in the olfactory region; both occurred in the 2000 mg/m^3 exposure group with the female rats more greatly affected than the male rats. These infiltrates are likely due to a clearance deficit resulting from irritation. Similar olfactory tissue effects (olfactory epithelial degeneration, goblet hyperplasia) were found among rats exposed for 90 days to 2000 mg/m^3 HEFA-C SPK (Wong *et al.*, 2013) and FT SPK (Mattie *et al.*, 2011a) fuels. Combined aerosol and vapor exposure is likely more irritating to both the nasal regions and the lungs than vapor exposures alone. No histological effects were found in the nasal cavities or lungs of rats exposed to petroleum-derived JP-8 vapor for 90-days continuously (Mattie *et al.*, 1991). An extended time period (90-days) may also be required to alter histology as no histological changes were reported in the nasal cavities or lungs after exposure to petroleum-derived Jet A for two weeks (Sweeney *et al.*, 2013).

Histopathology also revealed an increase in age-related chronic progressive glomerulonephropathy in male rats that increased with SB-8 fuel exposure. This correlates with significant increases of α_{2u}-globin found among male rats in all exposure groups (Table 11). Similarly, male rats exposed to 700 and 2000 mg/m^3 Gevo (bio) ATJ SPK also expressed significantly higher levels of this protein (Sterner *et al.*, 2015). Exposure to the other alternative fuels made through different chemical processes (FT and HEFA-C SPK fuels) resulted in relatively small increases of α_{2u}-globin (Mattie *et al.*, 2011a; Wong *et al.*, 2013), while petroleum-derived JP-8 strongly induces the production of this protein (Mattie *et al.*, 1991). α_{2u}-Globulin is a male rat-specific protein that produces hyaline droplets after hydrocarbon exposure, ultimately resulting in increased renal tubule tumors; these tumors have been seen in male rats exposed to hydrocarbons for one year and monitored for up to two years (Bruner *et al.*, 1993). As this effect is observed in male rats with exposure to jet fuels or similar substances, it is referred to as hydrocarbon nephropathy. As such, this protein-overload disease is considered to be male rat specific and not pertinent to human health (Borghoff *et al.*, 1990; Hard *et al.*, 1993).

Hematological changes in exposed male rats were limited to increased platelet counts; counts increased with exposure concentration and were significantly different from the control counts in the 2000 mg/m^3 exposure group. None of the standard hematological parameters, including clinical chemistry and clotting factors, were significantly different from the control values in female rats. No biologically significant changes attributable to exposure have been identified in the clinical chemistry and hematologic analyses for male or female rats exposed to JP-8 (Mattie *et al.*, 1991), FT SPK (Mattie *et al.*, 2011a), HEFA-C SPK (Wong *et al.*, 2013), or Gevo (bio) ATJ SPK (Sterner *et al.*, 2015) during their respective 90-day inhalation studies.

In conjunction with the 90-day study, SB-8 ATJ SPK was assessed using the mammalian micronucleus assay. Following a two-week exposure under the same conditions as the animals in the 90-day study, rats in the micronucleus assay (5 rats per sex per concentration) were euthanized and their femoral bone marrow cells were examined for the formation of micronuclei, a marker of damage to the genetic material (DNA in chromosomes) of the cell (*i.e.,* genotoxicity). During improper cell division, damaged chromosomes may leave fragments called "micronuclei" that can be observed and the incidence measured. Damage to the cell's genetic material can cause mutations (changes) that may lead to cancer. The assay also requires the quantitation of reticulocytes, as compared to other cell types, as an indicator of bone marrow toxicity (decreased reticulocytes) or a marker of immune response (increased reticulocytes). SB-8 ATJ fuel exposure resulted in no significant changes in percent reticulocytes or percent micronucleated reticulocytes, indicating no adverse effects on the bone marrow and no indication of clastogenicity. The alternative fuels FT SPK, HEFA-C, and Gevo (bio) ATJ SPK were also found to be non-genotoxic through the micronucleus assay (Mattie *et al.*, 2011b; Wong *et al.*, 2013; Sterner *et al.*, 2015; respectively).

Both SB fuels (SB-8 and SB ATJ SKA (old)) previously were tested for mutagenic potential using the reverse mutation assay (Ames test), with and without metabolic activation (U.S. EPA, 1998c). The assay utilized four strains of *Salmonella typhimurium* (TA-98, TA-100, TA-1535 and TA-1537) and one strain of *Escherichia coli* (WP2) to detect various point mutations induced on the DNA level. Riccio *et al.* (2010) found no evidence of mutagenicity when testing SB ATJ SKA (old) (POSF 10234 with additives). In addition, there was no evidence of mutagenicity with SB ATJ SKA (new) with additives (POSF 8452) (Mumy *et al.*, 2015).

Similarly, Gevo (bio) ATJ SPK were found non-mutagenic by Mumy *et al.* (2015). HEFA-C and HEFA from a tallow feedstock (rendered beef fat, HEFA-T) were established as non-mutagenic by Mattie *et al.* (2013). Riccio *et al.* (2010) found HEFA from mixed fats and oils (HEFA-F) to be negative in the Ames test; HEFA-F was referred to in this study as R-8 or renewable JP-8 (POSF log book number 5469). FT SPK was shown to be non-mutagenic by the Ames assay in two studies (Mattie *et al.*, 2011c; Riccio *et al.*, 2010). FT SPK was also negative in a chromosomal aberration assay in which human lymphocytes were exposed to the fuel *in vitro* (Mattie *et al.*, 2011c).

JP-8 has been found to be non-mutagenic and non-genotoxic in multiple studies. The Ames assay was relatively new when Brusick and Matheson (1978) demonstrated that JP-8 was not mutagenic. In a dermal variation of the mammalian micronucleus test, mice were treated with either a single or multiple applications of JP-8 and Jet A fuels. Using several different dermal

exposure regimens, no statistically significant differences in the incidence of reticulocytes or micronucleated reticulocytes was observed in the bone marrow and/or peripheral blood of mice treated with JP-8 or Jet-A when compared with those of untreated control animals (Vijayalaxmi *et al.*, 2006; Vijayalaxmi, 2011). Based on the current study and previous assays, SB-8 and the other tested jet fuels (synthetic and petroleum-based) are not expected to have mutagenic potential or pose an excess cancer risk when used in an occupational setting.

6.0 CONCLUSIONS

Overall, the 90-day study with SB ATJ SKA (new) with additives (SB-8) resulted in a minimal hyperplasic response in the alveoli for rats in the 2000 mg/m^3 exposure group. These effects have been found before with other alternative fuels previously tested in this same 90-day study design (Gevo (bio) ATJ SPK, Sterner *et al.*, 2015; FT SPK, Mattie *et al.*, 2011a). Furthermore, SB-8 ATJ SPK did not produce any unexpected toxicity in the 90-day study. Reproductive effects and evidence of genotoxicity and mutagenicity were both negative. Limited and minor neurological effects at 2000 mg/m^3 were found. Some mild behavioral changes (urine staining of fur due to decreased grooming) in female rats occurred. Occupational or operational inhalation of SB-8, alone or in a 50:50 blend with petroleum-derived JP-8, is unlikely to increase human health risks in the military workplace.

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APPENDIX A. INHALATION EXPOSURE SUMMARY

CHAMBER DISTRIBUTION

2000 mg/m^3 SB-8 Exposure Chamber Uniformity Measurements

Sample Location	TP Total Port Concentration (ppm)	WP Temporal (Within Port) Concentration (ppm)
#5 (home)		1408
#6 (Right Middle)	1409	
#5 (home)		1420
#2 (Center Top)	1468	
#5 (home)		1465
#8 (Center Bottom)	1454	
#5 (home)		1475
#1 (Left Top)	1460	
#5 (home)		1488
#7 (Left Bottom)	1441	
#5 (home)		1444
#9 (Right Bottom)	1455	
#5 (home)		1487
#4 (Left Middle)	1334	
#5 (home)		1495
#3 (Right Top)	1469	
#5 (home)		1464
#5 (Mean of TP)	1461	

Mean	1439	1461
Standard Deviation	43	31
N	9	9

Coefficient of variation (CV) for:

Total Port Concentration (TPCV) = 3.02%
Within Port Concentration (WPCV) = 2.10%
Between Port Concentration (BPCV) = 2.16%

Where: TPCV = [SD (TP) / Mean (TP)] * 100
WPCV = [SD (WP) / Mean (WP)] * 100
BPCV = Square Root [(TPCV) ^{2} - (WPCV) ^{2}]

IN-STUDY CONDITIONS

Environmental Data during Exposures

			Control 0 mg/m^3	200 mg/m^3	700 mg/m^3	2000 mg/m^3
Temperature	(°F)	Mean	72.0	71.9	73.2	72.8
		SD	0.4	0.4	0.7	0.3
		Min	70.8	70.8	71.8	71.9
		Max	73.1	72.9	74.9	73.7
		Count	70	70	70	70
Temperature	(°C)	Mean	22.2	22.2	22.9	22.7
		SD	0.2	0.2	0.4	0.2
		Min	21.6	21.6	22.1	22.2
		Max	22.8	22.7	23.9	23.2
		Count	70	70	70	70
Humidity	(L/min)	Mean	25.1	24.0	22.7	24.3
		SD	6.7	6.8	6.7	6.8
		Min	14.7	14.1	13.4	14.5
		Max	39.9	39.3	37.5	38.5
		Count	70	70	70	70
Supply Air Flow Rate Supply Air	(L/min)	Mean	120	120	120	120
		SD	1	0	0	0
		Min	115	118	118	118
		Max	121	120	121	121
		Count	70	70	70	70
Static Pressure	(" H_2O)	Mean	-0.4	-0.37	-0.44	-0.44
		SD	0.19	0.11	0.22	0.11
		Min	-0.82	-0.56	-0.83	-0.81
		Max	-0.06	-0.04	0.04	-0.26
		Count	70	70	70	70

Note: " H_2O = inches of water; Max = maximum; Min = minimum; SD = standard deviation

Control (0 mg/m^3) Inhalation Atmosphere Data

Exposure Day	Date	Data Type	Control (0 mg/m^3)				
			Temperature (° F)	Temperature (° C)	Relative Humidity (%)	Chamber Flow (L/min)	Static Pressure ("H2O)
1	10 02 2012	MEAN	70.8	21.6	39.9	119	-0.32
		SD	0.6	0.4	7.6	1	0.15
		MIN.	69.3	20.7	33.6	117	-0.42

		MAX.	71.5	21.9	58.4	120	0.00
		COUNT	30	30	30	30	30
2	10 03 2012	MEAN	71.5	22.0	39.1	120	-0.36
		SD	71.0	21.7	37.4	119	-0.38
		MIN.	0.5	0.3	5.1	0	0.09
		MAX.	69.9	21.1	33.6	117	-0.42
		COUNT	72	22	50	120	0
3	10 04 2012	MEAN	71.9	22.2	36.2	120	-0.38
		SD	0.7	0.4	3.1	1	0.11
		MIN.	69.4	20.8	33.9	118	-0.48
		MAX.	72.5	22.5	47.7	120	0.00
		COUNT	26	26	26	26	26
4	10 05 2012	MEAN	72.0	22.2	36.5	119	-0.33
		SD	0.6	0.4	3.9	1	0.14
		MIN.	70.3	21.3	33.1	118	-0.39
		MAX.	72.5	22.5	46.8	120	0.00
		COUNT	26	26	26	26	26
8	10 09 2012	MEAN	72.0	22.2	27.0	120	-0.28
		SD	0.7	0.4	3.7	1	0.09
		MIN.	70.0	21.1	23.7	119	-0.33
		MAX.	72.8	22.7	42.7	120	0.00
		COUNT	27	27	27	27	27
9	10 10 2012	MEAN	72.7	22.6	29.0	115	-0.36
		SD	0.8	0.4	5.2	22	0.09
		MIN.	69.5	20.8	22.6	8	-0.41
		MAX.	73.4	23.0	42.6	120	0.00
		COUNT	25	25	25	25	25
10	10 11 2012	MEAN	73.0	22.8	26.6	119	-0.44
		SD	0.4	0.2	3.0	1	0.07
		MIN.	71.9	22.2	22.1	116	-0.54
		MAX.	73.5	23.0	33.9	120	-0.35
		COUNT	24	24	24	24	24
11	10 12 2012	MEAN	72.5	22.5	24.6	119	-0.57
		SD	0.4	0.2	3.3	0	0.02
		MIN.	71.3	21.8	20.0	119	-0.59
		MAX.	73.1	22.8	35.7	120	-0.49
		COUNT	24	24	24	24	24
14	10 15 2012	MEAN	72.7	22.6	33.4	120	-0.35
		SD	0.3	0.1	4.1	0	0.04
		MIN.	72.0	22.2	20.6	119	-0.53
		MAX.	73.1	22.8	43.0	120	-0.30
		COUNT	25	25	25	25	25
15	10 16 2012	MEAN	72.7	22.6	29.0	120	-0.13

		SD	0.5	0.3	1.7	0	0.04
		MIN.	71.4	21.9	25.7	120	-0.30
		MAX.	73.2	22.9	32.6	120	-0.09
		COUNT	24	24	24	24	24
16	10 17 2012	MEAN	72.8	22.6	33.8	119	-0.30
		SD	0.6	0.3	2.4	0	0.04
		MIN.	71.1	21.7	28.1	119	-0.33
		MAX.	73.3	23.0	39.4	120	-0.11
		COUNT	25	25	25	25	25
17	10 18 2012	MEAN	72.3	22.4	31.8	120	-0.20
		SD	0.4	0.2	6.6	0	0.03
		MIN.	71.3	21.8	21.9	119	-0.31
		MAX.	73.2	22.9	46.0	121	-0.16
		COUNT	24	24	24	24	24
18	10 19 2012	MEAN	72.3	22.4	27.7	120	-0.22
		SD	0.4	0.2	1.9	0	0.01
		MIN.	71.5	21.9	21.9	119	-0.23
		MAX.	72.8	22.7	32.8	121	-0.18
		COUNT	25	25	25	25	25
21	10 22 2012	MEAN	72.4	22.5	36.6	120	-0.31
		SD	0.5	0.3	2.8	0	0.03
		MIN.	71.1	21.7	27.0	119	-0.34
		MAX.	73.0	22.8	42.8	121	-0.20
		COUNT	25	25	25	25	25
22	10 23 2012	MEAN	73.1	22.8	39.2	120	-0.36
		SD	0.3	0.2	2.2	0	0.04
		MIN.	72.3	22.4	36.0	119	-0.43
		MAX.	73.4	23.0	47.2	121	-0.27
		COUNT	24	24	24	24	24
23	10 24 2012	MEAN	71.9	22.2	38.2	120	-0.37
		SD	0.5	0.3	1.7	0	0.03
		MIN.	70.8	21.6	36.3	120	-0.42
		MAX.	73.2	22.9	44.0	120	-0.31
		COUNT	25	25	25	25	25
24	10 25 2012	MEAN	71.7	22.1	36.1	120	-0.10
		SD	0.5	0.3	1.4	0	0.05
		MIN.	70.5	21.4	33.8	119	-0.31
		MAX.	72.3	22.4	39.7	120	-0.07
		COUNT	25	25	25	25	25
25	10 26 2012	MEAN	71.5	21.9	33.1	120	-0.29
		SD	0.5	0.3	2.7	0	0.07
		MIN.	70.2	21.2	30.4	119	-0.35
		MAX.	72.3	22.4	41.5	122	-0.09

		COUNT	25	25	25	25	25
28	10 29 2012	MEAN	72.1	22.3	27.0	120	-0.34
		SD	1.0	0.6	3.8	0	0.03
		MIN.	70.6	21.5	23.3	119	-0.42
		MAX.	74.7	23.7	36.3	121	-0.29
		COUNT	25	25	25	25	25
29	10 30 2012	MEAN	71.7	22.1	26.2	119	-0.16
		SD	0.5	0.3	1.6	1	0.06
		MIN.	71.1	21.7	23.7	119	-0.32
		MAX.	73.1	22.8	29.5	121	-0.04
		COUNT	24	24	24	24	24
30	10 31 2012	MEAN	72.1	22.3	24.9	121	-0.11
		SD	0.4	0.2	1.5	0	0.01
		MIN.	71.2	21.8	23.6	120	-0.13
		MAX.	73.1	22.8	29.5	121	-0.06
		COUNT	24	24	24	24	24
31	11 01 2012	MEAN	71.5	21.9	24.5	120	-0.16
		SD	0.3	0.2	1.6	0	0.02
		MIN.	70.9	21.6	23.2	120	-0.18
		MAX.	72.1	22.3	30.2	121	-0.10
		COUNT	25	25	25	25	25
32	11 02 2012	MEAN	71.5	21.9	20.3	121	-0.25
		SD	0.3	0.2	1.5	0	0.03
		MIN.	70.9	21.6	18.6	120	-0.27
		MAX.	72.2	22.3	24.4	121	-0.14
		COUNT	23	23	23	23	23
35	11 05 2012	MEAN	71.3	21.8	20.8	120	-0.37
		SD	0.3	0.2	1.7	0	0.03
		MIN.	70.6	21.5	18.4	120	-0.40
		MAX.	71.9	22.2	24.8	121	-0.24
		COUNT	24	24	24	24	24
36	11 06 2012	MEAN	71.7	22.1	20.5	120	-0.30
		SD	0.4	0.2	1.1	0	0.02
		MIN.	70.8	21.6	18.7	119	-0.38
		MAX.	72.5	22.5	23.8	121	-0.25
		COUNT	25	25	25	25	25
37	11 07 12	MEAN	71.6	22.0	22.0	120	-0.29
		SD	0.5	0.3	1.4	0	0.01
		MIN.	70.5	21.4	19.9	120	-0.31
		MAX.	72.4	22.4	26.5	120	-0.25
		COUNT	25	25	25	25	25
38	11 08 12	MEAN	72.2	22.3	22.9	120	-0.27
		SD	0.5	0.3	1.9	0	0.01

		MIN.	71.1	21.7	19.8	120	-0.30
		MAX.	72.8	22.7	27.9	121	-0.25
		COUNT	24	24	24	24	24
39	11 09 12	MEAN	71.5	22.0	23.8	120	-0.30
		SD	0.5	0.3	1.3	0	0.02
		MIN.	70.5	21.4	19.8	119	-0.34
		MAX.	72.7	22.6	27.9	121	-0.26
		COUNT	25	25	25	25	25
43	11 13 2012	MEAN	71.8	22.1	19.2	120	-0.39
		SD	0.3	0.2	1.8	0	0.04
		MIN.	71.1	21.7	17.3	120	-0.44
		MAX.	72.3	22.4	24.2	120	-0.26
		COUNT	25	25	25	25	25
44	11 14 2012	MEAN	72.1	22.3	24.7	120	-0.40
		SD	0.5	0.3	2.0	0	0.03
		MIN.	71.0	21.7	18.2	119	-0.45
		MAX.	73.1	22.8	28.4	121	-0.33
		COUNT	25	25	25	25	25
45	11 15 2012	MEAN	71.5	21.9	22.5	120	-0.39
		SD	0.3	0.2	2.3	0	0.02
		MIN.	70.9	21.6	18.1	119	-0.41
		MAX.	72.0	22.2	25.4	120	-0.33
		COUNT	24	24	24	24	24
46	11 16 2012	MEAN	71.6	22.0	23.4	120	-0.27
		SD	0.4	0.2	1.2	0	0.01
		MIN.	70.7	21.5	20.9	120	-0.33
		MAX.	72.3	22.4	26.4	120	-0.26
		COUNT	25	25	25	25	25
49	11 19 2012	MEAN	71.7	22.1	22.2	120	-0.36
		SD	0.4	0.2	1.8	0	0.02
		MIN.	70.5	21.4	20.5	120	-0.38
		MAX.	72.2	22.4	28.7	120	-0.26
		COUNT	25	25	25	25	25
50	11 20 2012	MEAN	72.0	22.2	24.3	120	-0.06
		SD	0.4	0.2	1.4	0	0.05
		MIN.	70.9	21.6	22.1	119	-0.31
		MAX.	72.5	22.5	28.2	120	-0.04
		COUNT	25	25	25	25	25
51	11 21 2012	MEAN	71.8	22.1	24.7	120	-0.31
		SD	0.3	0.1	1.4	0	0.06
		MIN.	71.3	21.8	22.8	119	-0.34
		MAX.	72.4	22.4	28.1	121	-0.05
		COUNT	24	24	24	24	24

53	11 23 2012	MEAN	72.5	22.5	23.2	119	-0.30
		SD	0.5	0.3	2.1	0	0.01
		MIN.	71.6	22.0	21.1	119	-0.32
		MAX.	73.2	22.9	29.5	120	-0.25
		COUNT	25	25	25	25	25
56	11 26 2012	MEAN	72.1	22.3	20.6	120	-0.27
		SD	0.4	0.2	1.5	0	0.01
		MIN.	71.1	21.7	19.1	119	-0.32
		MAX.	73.2	22.9	24.4	121	-0.25
		COUNT	25	25	25	25	25
57	11 27 2012	MEAN	72.1	22.3	17.8	120	-0.39
		SD	0.4	0.2	2.2	0	0.03
		MIN.	71.1	21.7	15.1	119	-0.41
		MAX.	72.6	22.6	24.4	120	-0.26
		COUNT	25	25	25	25	25
58	11 28 2012	MEAN	72.1	22.3	17.6	120	-0.41
		SD	0.3	0.2	1.3	0	0.01
		MIN.	71.3	21.9	16.1	119	-0.42
		MAX.	72.5	22.5	21.9	120	-0.37
		COUNT	25	25	25	25	25
59	11 29 2012	MEAN	72.0	22.2	20.0	120	-0.41
		SD	0.3	0.2	2.3	0	0.01
		MIN.	71.1	21.7	17.1	119	-0.43
		MAX.	72.5	22.5	25.4	120	-0.38
		COUNT	24	24	24	24	24
60	11 30 2012	MEAN	71.9	22.2	20.5	119	-0.36
		SD	0.3	0.2	1.1	0	0.01
		MIN.	70.9	21.6	18.7	119	-0.40
		MAX.	72.3	22.4	23.2	120	-0.34
		COUNT	24	24	24	24	24
63	12 03 2012	MEAN	71.9	22.2	33.4	120	-0.14
		SD	0.3	0.2	2.7	0	0.05
		MIN.	71.0	21.6	21.7	119	-0.36
		MAX.	72.3	22.4	36.8	120	-0.11
		COUNT	25	25	25	25	25
64	12 04 2012	MEAN	72.1	22.3	36.0	120	-0.55
		SD	0.4	0.2	3.5	1	0.10
		MIN.	71.0	21.7	32.6	119	-0.61
		MAX.	72.5	22.5	46.2	121	-0.11
		COUNT	25	25	25	25	25
65	12 05 20 12	MEAN	72.2	22.3	23.5	121	-0.60
		SD	0.4	0.2	4.7	0	0.02
		MIN.	71.4	21.9	20.9	121	-0.66

		MAX.	72.6	22.5	43.4	121	-0.53
		COUNT	25	25	25	25	25
66	12 06 2012	MEAN	72.3	22.4	19.0	120	-0.60
		SD	0.4	0.2	1.1	0	0.02
		MIN.	71.0	21.7	17.6	120	-0.65
		MAX.	72.7	22.6	22.1	121	-0.55
		COUNT	24	24	24	24	24
67	12 07 2012	MEAN	72.0	22.2	31.5	120	-0.32
		SD	0.4	0.2	3.0	0	0.09
		MIN.	71.0	21.7	19.4	118	-0.61
		MAX.	72.6	22.6	37.9	120	0.00
		COUNT	26	26	26	26	26
70	12 10 2012	MEAN	72.3	22.4	23.2	120	-0.32
		SD	0.4	0.2	4.1	0	0.07
		MIN.	71.1	21.7	20.1	118	-0.36
		MAX.	72.8	22.7	37.9	121	0.00
		COUNT	25	25	25	25	25
71	12 11 2012	MEAN	72.4	22.4	19.5	120	-0.61
		SD	0.4	0.2	2.1	0	0.07
		MIN.	71.1	21.7	17.0	120	-0.65
		MAX.	72.9	22.7	24.8	122	-0.33
		COUNT	25	25	25	25	25
72	12 12 2012	MEAN	72.4	22.4	17.1	120	-0.48
		SD	0.4	0.2	1.1	0	0.03
		MIN.	71.1	21.7	15.4	119	-0.60
		MAX.	72.7	22.6	20.2	120	-0.42
		COUNT	25	25	25	25	25
73	12 13 2012	MEAN	71.4	21.9	14.7	119	-0.42
		SD	0.4	0.2	0.6	0	0.02
		MIN.	70.5	21.4	13.6	119	-0.51
		MAX.	72.6	22.6	16.8	120	-0.41
		COUNT	24	24	24	24	24
74	12 14 2012	MEAN	71.2	21.8	18.5	120	-0.69
		SD	0.3	0.2	1.3	0	0.08
		MIN.	70.4	21.3	14.0	119	-0.73
		MAX.	71.6	22.0	22.3	120	-0.41
		COUNT	24	24	24	24	24
77	12 17 2012	MEAN	71.9	22.2	28.0	119	-0.37
		SD	0.4	0.2	2.8	0	0.02
		MIN.	71.0	21.6	18.0	118	-0.44
		MAX.	72.4	22.5	33.3	119	-0.35
		COUNT	24	24	24	24	24
78	12 18 2012	MEAN	72.3	22.4	21.7	120	-0.19

		SD	0.4	0.2	2.4	0	0.04
		MIN.	71.0	21.7	19.0	118	-0.35
		MAX.	72.7	22.6	28.7	121	-0.15
		COUNT	24	24	24	24	24
79	12 19 2012	MEAN	71.9	22.2	22.4	120	-0.10
		SD	0.4	0.2	1.9	0	0.02
		MIN.	70.6	21.4	19.9	120	-0.18
		MAX.	72.3	22.4	27.0	120	-0.09
		COUNT	25	25	25	25	25
80	12 20 2012	MEAN	71.1	21.7	28.6	120	-0.47
		SD	0.4	0.2	1.8	0	0.09
		MIN.	70.4	21.3	23.0	119	-0.54
		MAX.	72.3	22.4	30.7	121	-0.10
		COUNT	25	25	25	25	25
81	12 21 2012	MEAN	71.6	22.0	17.1	120	-0.52
		SD	0.3	0.2	3.0	0	0.03
		MIN.	70.6	21.4	15.2	119	-0.54
		MAX.	71.9	22.2	30.7	121	-0.40
		COUNT	25	25	25	25	25
84	12 24 2012	MEAN	71.9	22.2	21.9	121	-0.51
		SD	0.3	0.2	1.4	0	0.01
		MIN.	71.2	21.8	16.7	120	-0.53
		MAX.	72.5	22.5	23.8	121	-0.50
		COUNT	24	24	24	24	24
87	12 27 2012	MEAN	71.8	22.1	18.9	120	-0.72
		SD	0.4	0.2	1.7	0	0.08
		MIN.	70.8	21.6	17.2	120	-0.89
		MAX.	72.2	22.4	23.4	121	-0.52
		COUNT	24	24	24	24	24
88	12 28 2012	MEAN	72.3	22.4	19.6	120	-0.63
		SD	0.4	0.2	1.8	0	0.03
		MIN.	71.3	21.8	17.8	119	-0.70
		MAX.	72.8	22.7	25.7	121	-0.52
		COUNT	25	25	25	25	25
91	12 31 2012	MEAN	72.2	22.4	19.9	120	-0.66
		SD	0.3	0.2	1.1	0	0.03
		MIN.	71.2	21.8	18.0	119	-0.68
		MAX.	72.6	22.6	22.7	121	-0.52
		COUNT	24	24	24	24	24
93	01 02 2013	MEAN	72.8	22.7	17.2	120	-0.65
		SD	0.5	0.3	1.1	0	0.02
		MIN.	71.5	21.9	16.0	120	-0.68
		MAX.	73.3	22.9	20.6	120	-0.58

		COUNT	25	25	25	25	25
94	01 03 2013	MEAN	72.6	22.6	17.1	120	-0.67
		SD	0.5	0.3	1.6	0	0.05
		MIN.	71.1	21.7	14.9	120	-0.72
		MAX.	73.1	22.8	20.1	121	-0.48
		COUNT	25	25	25	25	25
95	01 04 2013	MEAN	71.8	22.1	19.8	121	-0.67
		SD	0.3	0.2	1.5	0	0.04
		MIN.	70.9	21.6	17.6	120	-0.69
		MAX.	72.7	22.6	24.5	121	-0.48
		COUNT	24	24	24	24	24
96	01 07 2013	MEAN	72.3	22.4	21.2	120	-0.70
		SD	0.4	0.2	1.8	0	0.02
		MIN.	71.3	21.9	18.2	119	-0.73
		MAX.	73.0	22.8	26.1	121	-0.65
		COUNT	25	25	25	25	25
97	01 08 2013	MEAN	72.0	22.2	20.4	118	-0.35
		SD	0.5	0.3	1.1	0	0.06
		MIN.	70.7	21.5	18.1	117	-0.65
		MAX.	72.9	22.7	23.3	119	-0.29
		COUNT	25	25	25	25	25
98	01 09 2013	MEAN	72.5	22.5	25.4	119	-0.74
		SD	0.4	0.2	1.9	0	0.08
		MIN.	71.2	21.8	18.1	118	-0.77
		MAX.	73.1	22.8	28.9	120	-0.36
		COUNT	25	25	25	25	25
99	01 10 2013	MEAN	72.1	22.3	19.6	119	-0.82
		SD	0.4	0.2	2.1	0	0.03
		MIN.	70.9	21.6	17.6	118	-0.89
		MAX.	72.7	22.6	25.3	120	-0.71
		COUNT	25	25	25	25	25
100	01 11 2013	MEAN	72.0	22.2	35.1	120	-0.62
		SD	0.4	0.2	4.5	0	0.04
		MIN.	70.7	21.5	18.9	118	-0.75
		MAX.	72.7	22.6	41.8	120	-0.50
		COUNT	25	25	25	25	25
103	01 14 2013	MEAN	72.5	22.5	18.3	120	-0.72
		SD	0.4	0.2	3.6	0	0.05
		MIN.	71.3	21.8	15.4	119	-0.75
		MAX.	72.8	22.7	31.4	121	-0.55
		COUNT	25	25	25	25	25
104	01 15 2013	MEAN	71.6	22.0	15.7	119	-0.80
		SD	0.4	0.2	1.0	0	0.06

		MIN.	70.8	21.5	14.4	118	-0.85
		MAX.	72.6	22.6	18.9	120	-0.55
		COUNT	25	25	25	25	25
		MEAN	72.0	22.2	25.1	120	-0.40
		SD	0.4	0.2	6.7	1	0.19
		MIN.	70.8	21.6	14.7	115	-0.82
		MAX.	73.1	22.8	39.9	121	-0.06
		COUNT	70	70	70	70	70

Notes: Max = maximum; Min = minimum; ND = no data collected; SD = standard deviation

200 mg/m^3 Inhalation Atmosphere Data

Exposure Day	Date	Data Type	200 mg/m^3 Temperature (° F)	Temperature (° C)	Relative Humidity (%)	Chamber Flow (L/min)	Static Pressure ("H2O)
1	10 02 2012	MEAN	70.8	21.6	37.9	118	-0.38
		SD	0.3	0.2	6.3	1	0.15
		MIN.	69.9	21.1	33.2	117	-0.46
		MAX.	71.1	21.7	54.6	119	0.00
		COUNT	28	28	28	28	28
2	10 03 2012	MEAN	71.6	22.0	35.4	120	-0.43
		SD	0.6	0.3	3.5	0	0.13
		MIN.	69.9	21.1	32.8	118	-0.50
		MAX.	71.9	22.2	49.0	120	0.00
		COUNT	26	26	26	26	26
3	10 04 2012	MEAN	71.2	21.8	36.6	120	-0.39
		SD	0.9	0.5	4.9	1	0.19
		MIN.	69.3	20.7	32.2	118	-0.57
		MAX.	71.9	22.2	47.9	121	0.00
		COUNT	30	30	30	30	30
4	10 05 2012	MEAN	71.8	22.1	36.2	118	-0.44
		SD	0.3	0.2	3.5	7	0.13
		MIN.	70.9	21.6	33.1	84	-0.51
		MAX.	72.1	22.3	51.9	120	0.00
		COUNT	28	28	28	28	28
8	10 09 2012	MEAN	71.7	22.1	26.0	119	-0.47
		SD	0.6	0.4	2.5	1	0.15
		MIN.	70.1	21.1	22.6	117	-0.56
		MAX.	72.3	22.4	34.1	121	0.00

		COUNT	27	27	27	27	27
9	10 10 2012	MEAN	72.5	22.5	27.6	120	-0.41
		SD	0.7	0.4	5.7	0	0.06
		MIN.	70.6	21.4	22.4	119	-0.45
		MAX.	73.2	22.9	44.8	120	-0.15
		COUNT	24	24	24	24	24
10	10 11 2012	MEAN	72.6	22.5	24.8	120	-0.44
		SD	0.6	0.3	2.9	1	0.04
		MIN.	71.0	21.6	20.0	117	-0.50
		MAX.	73.1	22.9	32.8	121	-0.37
		COUNT	24	24	24	24	24
11	10 12 2012	MEAN	72.4	22.4	24.7	120	-0.56
		SD	0.6	0.3	4.0	0	0.02
		MIN.	70.7	21.5	19.7	120	-0.59
		MAX.	72.9	22.7	37.3	121	-0.52
		COUNT	24	24	24	24	24
14	10 15 2012	MEAN	72.8	22.7	30.9	120	-0.34
		SD	0.8	0.5	4.4	0	0.04
		MIN.	70.6	21.4	20.0	120	-0.52
		MAX.	73.5	23.1	42.7	120	-0.32
		COUNT	25	25	25	25	25
15	10 16 2012	MEAN	72.7	22.6	27.3	120	-0.37
		SD	0.5	0.3	2.2	1	0.02
		MIN.	71.3	21.8	24.8	119	-0.40
		MAX.	73.3	22.9	33.5	121	-0.34
		COUNT	24	24	24	24	24
16	10 17 2012	MEAN	72.2	22.3	33.1	120	-0.34
		SD	0.6	0.3	3.4	0	0.01
		MIN.	70.3	21.3	25.1	119	-0.37
		MAX.	72.8	22.7	43.4	120	-0.32
		COUNT	25	25	25	25	25
17	10 18 2012	MEAN	72.7	22.6	30.8	120	-0.25
		SD	0.7	0.4	6.4	0	0.02
		MIN.	70.7	21.5	22.7	119	-0.34
		MAX.	73.4	23.0	47.4	121	-0.21
		COUNT	24	24	24	24	24
18	10 19 2012	MEAN	72.6	22.6	26.6	119	-0.29
		SD	0.6	0.3	2.4	0	0.02
		MIN.	71.2	21.8	24.0	119	-0.31
		MAX.	73.2	22.9	34.9	120	-0.20
		COUNT	25	25	25	25	25

21	10 22 2012	MEAN	72.6	22.5	36.0	120	-0.40
		SD	0.5	0.3	3.2	0	0.05
		MIN.	71.0	21.7	25.2	119	-0.46
		MAX.	73.2	22.9	44.4	121	-0.20
		COUNT	25	25	25	25	25
22	10 23 2012	MEAN	72.1	22.3	39.3	120	-0.42
		SD	0.6	0.3	3.0	0	0.04
		MIN.	70.3	21.3	35.9	119	-0.48
		MAX.	72.8	22.7	49.2	121	-0.36
		COUNT	24	24	24	24	24
23	10 24 2012	MEAN	71.4	21.9	38.4	120	-0.47
		SD	0.5	0.3	2.3	0	0.03
		MIN.	70.1	21.2	36.0	119	-0.50
		MAX.	72.4	22.4	46.0	121	-0.39
		COUNT	25	25	25	25	25
24	10 25 2012	MEAN	71.5	21.9	36.3	120	-0.39
		SD	0.4	0.2	2.0	0	0.02
		MIN.	70.3	21.3	33.5	120	-0.44
		MAX.	71.7	22.1	42.7	121	-0.34
		COUNT	25	25	25	25	25
25	10 26 2012	MEAN	71.8	22.1	31.7	120	-0.38
		SD	0.6	0.3	2.9	0	0.03
		MIN.	70.2	21.2	29.1	120	-0.40
		MAX.	72.3	22.4	40.5	120	-0.28
		COUNT	25	25	25	25	25
28	10 29 2012	MEAN	72.8	22.6	25.3	120	-0.39
		SD	1.0	0.6	3.8	0	0.04
		MIN.	70.8	21.6	20.9	119	-0.50
		MAX.	74.7	23.7	33.5	121	-0.35
		COUNT	25	25	25	25	25
29	10 30 2012	MEAN	72.3	22.4	24.4	120	-0.23
		SD	0.6	0.3	1.6	0	0.03
		MIN.	70.8	21.5	22.2	120	-0.36
		MAX.	73.5	23.1	29.6	121	-0.18
		COUNT	24	24	24	24	24
30	10 31 2012	MEAN	72.9	22.7	23.6	120	-0.04
		SD	0.5	0.3	1.6	0	0.04
		MIN.	71.5	21.9	21.8	120	-0.24
		MAX.	73.5	23.1	29.4	121	-0.02
		COUNT	24	24	24	24	24
31	11 01 2012	MEAN	71.9	22.1	22.6	120	-0.30

		SD	0.4	0.2	1.4	1	0.06
		MIN.	70.9	21.6	21.3	119	-0.35
		MAX.	72.9	22.7	27.9	121	-0.04
		COUNT	25	25	25	25	25
32	11 02 2012	MEAN	71.6	22.0	18.6	120	-0.40
		SD	0.4	0.2	1.1	0	0.03
		MIN.	70.5	21.4	17.5	120	-0.43
		MAX.	72.0	22.2	22.0	121	-0.30
		COUNT	23	23	23	23	23
35	11 05 2012	MEAN	72.0	22.2	19.3	121	-0.36
		SD	0.4	0.2	1.8	0	0.01
		MIN.	71.1	21.7	16.9	120	-0.40
		MAX.	72.4	22.5	24.2	121	-0.35
		COUNT	24	24	24	24	24
36	11 06 2012	MEAN	72.0	22.2	18.8	120	-0.42
		SD	0.4	0.2	1.1	0	0.02
		MIN.	70.7	21.5	17.1	119	-0.46
		MAX.	72.3	22.4	21.4	121	-0.36
		COUNT	25	25	25	25	25
37	11 07 12	MEAN	71.8	22.1	20.8	120	-0.43
		SD	0.5	0.3	1.8	0	0.02
		MIN.	70.6	21.4	18.5	119	-0.47
		MAX.	72.3	22.4	27.8	121	-0.38
		COUNT	25	25	25	25	25
38	11 08 12	MEAN	71.9	22.2	21.4	121	-0.47
		SD	0.6	0.3	1.6	1	0.03
		MIN.	70.4	21.3	18.7	120	-0.51
		MAX.	72.5	22.5	26.1	122	-0.38
		COUNT	24	24	24	24	24
39	11 09 12	MEAN	71.8	22.1	23.3	120	-0.42
		SD	0.5	0.3	1.2	0	0.02
		MIN.	70.3	21.3	18.7	120	-0.49
		MAX.	72.3	22.4	26.7	121	-0.39
		COUNT	25	25	25	25	25
43	11 13 2012	MEAN	71.8	22.1	16.8	120	-0.55
		SD	0.5	0.3	2.0	0	0.04
		MIN.	70.4	21.3	14.5	120	-0.60
		MAX.	72.2	22.4	23.0	121	-0.40
		COUNT	25	25	25	25	25
44	11 14 2012	MEAN	72.1	22.3	23.4	121	-0.49
		SD	0.5	0.3	2.5	0	0.02

		MIN.	70.6	21.4	15.3	120	-0.52
		MAX.	72.6	22.5	29.4	121	-0.46
		COUNT	25	25	25	25	25
45	11 15 2012	MEAN	71.8	22.1	21.7	120	-0.50
		SD	0.4	0.2	1.7	0	0.02
		MIN.	70.6	21.4	18.6	120	-0.53
		MAX.	72.2	22.4	24.1	121	-0.44
		COUNT	24	24	24	24	24
46	11 16 2012	MEAN	71.8	22.1	22.5	120	-0.56
		SD	0.5	0.3	1.5	0	0.03
		MIN.	70.5	21.4	20.0	119	-0.59
		MAX.	72.3	22.4	26.6	122	-0.44
		COUNT	25	25	25	25	25
49	11 19 2012	MEAN	71.7	22.1	21.1	120	-0.49
		SD	0.5	0.3	2.4	0	0.01
		MIN.	70.2	21.2	19.4	120	-0.52
		MAX.	72.2	22.3	30.1	121	-0.47
		COUNT	25	25	25	25	25
50	11 20 2012	MEAN	71.5	21.9	22.2	120	-0.40
		SD	0.5	0.3	1.0	0	0.02
		MIN.	70.2	21.2	21.0	120	-0.47
		MAX.	72.0	22.2	25.5	120	-0.35
		COUNT	25	25	25	25	25
51	11 21 2012	MEAN	71.7	22.1	23.3	120	-0.40
		SD	0.5	0.3	1.8	0	0.01
		MIN.	70.4	21.3	20.9	120	-0.43
		MAX.	72.3	22.4	28.7	121	-0.38
		COUNT	24	24	24	24	24
53	11 23 2012	MEAN	72.2	22.3	21.8	119	-0.32
		SD	0.6	0.3	2.1	0	0.02
		MIN.	70.6	21.5	19.5	119	-0.40
		MAX.	72.8	22.7	29.1	120	-0.27
		COUNT	25	25	25	25	25
56	11 26 2012	MEAN	72.1	22.3	19.6	120	-0.46
		SD	0.5	0.3	1.6	0	0.04
		MIN.	70.7	21.5	17.1	119	-0.50
		MAX.	72.8	22.7	24.2	121	-0.27
		COUNT	25	25	25	25	25
57	11 27 2012	MEAN	72.0	22.2	16.3	120	-0.49
		SD	0.4	0.2	2.8	0	0.02
		MIN.	70.6	21.5	13.8	120	-0.51

		MAX.	72.4	22.5	24.9	120	-0.43
		COUNT	25	25	25	25	25
58	11 28 2012	MEAN	71.8	22.1	16.3	120	-0.55
		SD	0.5	0.3	1.9	0	0.02
		MIN.	70.3	21.3	13.9	120	-0.57
		MAX.	72.4	22.4	22.7	121	-0.49
		COUNT	25	25	25	25	25
59	11 29 2012	MEAN	71.8	22.1	18.8	120	-0.54
		SD	0.4	0.2	2.3	0	0.02
		MIN.	70.6	21.4	16.0	119	-0.59
		MAX.	72.3	22.4	24.6	120	-0.51
		COUNT	24	24	24	24	24
60	11 30 2012	MEAN	72.0	22.2	20.6	120	-0.47
		SD	0.6	0.3	1.4	0	0.03
		MIN.	70.3	21.3	17.0	119	-0.54
		MAX.	72.6	22.6	24.8	121	-0.44
		COUNT	24	24	24	24	24
63	12 03 2012	MEAN	71.4	21.9	32.7	120	-0.40
		SD	0.4	0.2	2.9	0	0.03
		MIN.	70.4	21.3	21.0	120	-0.46
		MAX.	72.5	22.5	38.6	121	-0.35
		COUNT	25	25	25	25	25
64	12 04 2012	MEAN	71.5	21.9	35.5	120	-0.33
		SD	0.5	0.3	3.4	0	0.02
		MIN.	70.3	21.3	32.8	120	-0.36
		MAX.	72.1	22.3	45.6	121	-0.27
		COUNT	25	25	25	25	25
65	12 05 20 12	MEAN	71.7	22.1	22.1	120	-0.37
		SD	0.5	0.3	4.9	1	0.08
		MIN.	70.4	21.3	19.7	119	-0.45
		MAX.	72.1	22.3	42.9	121	-0.26
		COUNT	25	25	25	25	25
66	12 06 2012	MEAN	72.0	22.2	18.5	120	-0.50
		SD	0.6	0.3	1.0	0	0.04
		MIN.	70.4	21.3	16.7	120	-0.57
		MAX.	72.5	22.5	20.1	121	-0.38
		COUNT	24	24	24	24	24
67	12 07 2012	MEAN	71.8	22.1	30.1	120	-0.33
		SD	0.5	0.3	2.8	0	0.07
		MIN.	70.5	21.4	19.0	118	-0.45
		MAX.	72.5	22.5	38.2	121	0.00

		COUNT	26	26	26	26	26
70	12 10 2012	MEAN	72.0	22.2	21.4	120	-0.26
		SD	0.7	0.4	4.1	0	0.05
		MIN.	70.3	21.3	18.9	118	-0.29
		MAX.	72.6	22.5	38.2	121	0.00
		COUNT	25	25	25	25	25
71	12 11 2012	MEAN	72.1	22.3	18.7	120	-0.44
		SD	0.6	0.3	2.0	0	0.04
		MIN.	70.4	21.3	15.7	120	-0.48
		MAX.	72.6	22.5	24.9	121	-0.25
		COUNT	25	25	25	25	25
72	12 12 2012	MEAN	72.1	22.3	15.8	120	-0.47
		SD	0.5	0.3	1.1	0	0.02
		MIN.	70.7	21.5	14.4	119	-0.50
		MAX.	72.6	22.6	19.2	120	-0.42
		COUNT	25	25	25	25	25
73	12 13 2012	MEAN	71.4	21.9	14.7	120	-0.52
		SD	0.4	0.2	1.0	0	0.04
		MIN.	70.3	21.3	13.5	119	-0.64
		MAX.	72.5	22.5	18.7	121	-0.42
		COUNT	24	24	24	24	24
74	12 14 2012	MEAN	71.1	21.7	17.3	120	-0.42
		SD	0.3	0.2	1.1	0	0.03
		MIN.	70.4	21.3	13.6	119	-0.50
		MAX.	71.5	21.9	20.9	120	-0.28
		COUNT	24	24	24	24	24
77	12 17 2012	MEAN	71.8	22.1	26.7	121	-0.22
		SD	0.5	0.3	2.5	1	0.03
		MIN.	70.6	21.4	17.0	119	-0.30
		MAX.	72.3	22.4	32.3	121	-0.19
		COUNT	24	24	24	24	24
78	12 18 2012	MEAN	72.2	22.3	20.3	121	-0.19
		SD	0.7	0.4	2.8	0	0.01
		MIN.	70.3	21.3	17.2	120	-0.22
		MAX.	72.7	22.6	27.4	121	-0.14
		COUNT	24	24	24	24	24
79	12 19 2012	MEAN	71.7	22.0	21.2	120	-0.22
		SD	0.6	0.4	1.0	0	0.03
		MIN.	70.1	21.2	19.0	120	-0.33
		MAX.	72.5	22.5	24.5	121	-0.17
		COUNT	25	25	25	25	25

80	12 20 2012	MEAN	70.8	21.6	27.3	119	-0.22
		SD	0.4	0.2	2.0	1	0.05
		MIN.	70.0	21.1	20.3	118	-0.30
		MAX.	72.2	22.3	29.5	121	-0.15
		COUNT	25	25	25	25	25
81	12 21 2012	MEAN	71.3	21.8	16.4	120	-0.28
		SD	0.5	0.3	2.9	0	0.03
		MIN.	70.2	21.2	14.8	119	-0.29
		MAX.	71.8	22.1	29.5	121	-0.15
		COUNT	25	25	25	25	25
84	12 24 2012	MEAN	72.0	22.2	21.5	121	-0.24
		SD	0.7	0.4	1.5	0	0.01
		MIN.	70.2	21.2	15.8	120	-0.27
		MAX.	72.7	22.6	23.5	121	-0.22
		COUNT	24	24	24	24	24
87	12 27 2012	MEAN	72.0	22.2	18.6	120	-0.32
		SD	0.7	0.4	1.9	0	0.04
		MIN.	70.4	21.3	16.8	120	-0.43
		MAX.	72.7	22.6	23.0	121	-0.25
		COUNT	24	24	24	24	24
88	12 28 2012	MEAN	71.5	22.0	18.8	120	-0.06
		SD	0.5	0.3	1.7	0	0.06
		MIN.	70.4	21.3	16.3	119	-0.33
		MAX.	72.6	22.6	23.6	120	-0.04
		COUNT	25	25	25	25	25
91	12 31 2012	MEAN	72.2	22.3	18.9	119	-0.28
		SD	0.5	0.3	1.2	1	0.05
		MIN.	70.8	21.6	16.3	119	-0.30
		MAX.	72.6	22.6	22.5	122	-0.05
		COUNT	24	24	24	24	24
93	01 02 2013	MEAN	71.7	22.1	15.6	120	-0.31
		SD	0.7	0.4	1.2	0	0.03
		MIN.	70.3	21.3	14.3	119	-0.41
		MAX.	72.5	22.5	19.9	120	-0.25
		COUNT	25	25	25	25	25
94	01 03 2013	MEAN	72.0	22.2	16.0	120	-0.40
		SD	0.7	0.4	1.2	0	0.06
		MIN.	70.2	21.2	13.7	119	-0.52
		MAX.	72.7	22.6	18.7	120	-0.30
		COUNT	25	25	25	25	25
95	01 04 2013	MEAN	71.5	22.0	18.1	120	-0.34

		SD	0.5	0.3	1.2	0	0.01
		MIN.	70.4	21.4	16.9	120	-0.36
		MAX.	72.4	22.5	22.8	121	-0.34
		COUNT	24	24	24	24	24
96	01 07 2013	MEAN	72.0	22.2	28.6	120	-0.35
		SD	0.6	0.3	3.4	0	0.02
		MIN.	70.4	21.3	18.5	119	-0.38
		MAX.	72.7	22.6	36.3	120	-0.33
		COUNT	25	25	25	25	25
97	01 08 2013	MEAN	71.9	22.2	19.7	119	-0.31
		SD	0.6	0.3	2.1	0	0.04
		MIN.	70.5	21.4	17.7	119	-0.44
		MAX.	72.7	22.6	25.8	120	-0.25
		COUNT	25	25	25	25	25
98	01 09 2013	MEAN	71.8	22.1	23.3	119	-0.37
		SD	0.5	0.3	1.3	0	0.06
		MIN.	70.4	21.3	18.3	119	-0.48
		MAX.	72.4	22.4	26.0	120	-0.32
		COUNT	25	25	25	25	25
99	01 10 2013	MEAN	71.8	22.1	18.4	120	-0.38
		SD	0.6	0.3	1.9	0	0.04
		MIN.	70.3	21.3	16.4	119	-0.50
		MAX.	72.4	22.5	22.9	121	-0.32
		COUNT	25	25	25	25	25
100	01 11 2013	MEAN	71.6	22.0	34.1	119	-0.20
		SD	0.4	0.2	4.4	0	0.04
		MIN.	70.4	21.3	18.8	119	-0.36
		MAX.	72.2	22.3	43.3	120	-0.17
		COUNT	25	25	25	25	25
103	01 14 2013	MEAN	71.9	22.1	16.9	120	-0.27
		SD	0.4	0.2	3.2	1	0.03
		MIN.	70.5	21.4	14.6	119	-0.29
		MAX.	72.2	22.3	30.6	122	-0.18
		COUNT	25	25	25	25	25
104	01 15 2013	MEAN	71.3	21.8	14.1	119	-0.35
		SD	0.5	0.3	0.9	0	0.03
		MIN.	70.2	21.2	13.0	118	-0.39
		MAX.	72.2	22.3	17.5	120	-0.22
		COUNT	25	25	25	25	25
		MEAN	71.9	22.2	24.0	120	-0.37

SD	0.4	0.2	6.8	0	0.11
MIN.	70.8	21.6	14.1	118	-0.56
MAX.	72.9	22.7	39.3	121	-0.04
COUNT	70	70	70	70	70

Notes: Max = maximum; Min = minimum; ND = no data collected; SD = standard deviation

700 mg/m^3 Inhalation Atmosphere Data

Exposure Day	Date	Data Type	700 mg/m^3				
			Temperature (° F)	Temperature (° C)	Relative Humidity (%)	Chamber Flow (L/min)	Static Pressure ("H2O)
1	10 02 2012	MEAN	71.8	22.1	37.5	118	-0.43
		SD	1.0	0.6	7.2	1	0.17
		MIN.	69.0	20.6	32.1	116	-0.54
		MAX.	73.0	22.8	55.5	119	0.01
		COUNT	28	28	28	28	28
2	10 03 2012	MEAN	73.8	23.2	34.1	119	-0.48
		SD	0.9	0.5	3.1	1	0.14
		MIN.	71.1	21.7	30.7	117	-0.54
		MAX.	74.6	23.7	43.3	120	0.02
		COUNT	26	26	26	26	26
3	10 04 2012	MEAN	73.4	23.0	33.4	120	-0.48
		SD	0.9	0.5	4.0	1	0.18
		MIN.	70.7	21.5	30.5	118	-0.78
		MAX.	74.4	23.5	45.7	121	0.01
		COUNT	27	27	27	27	27
4	10 05 2012	MEAN	73.5	23.1	34.0	118	-0.36
		SD	1.1	0.6	5.3	7	0.19
		MIN.	69.8	21.0	29.9	84	-0.53
		MAX.	74.5	23.6	47.4	120	0.01
		COUNT	28	28	28	28	28
8	10 09 2012	MEAN	73.1	22.8	24.5	119	-0.49
		SD	0.9	0.5	2.7	1	0.17
		MIN.	71.7	22.0	21.1	116	-0.60
		MAX.	74.4	23.6	34.2	122	0.01
		COUNT	27	27	27	27	27
9	10 10 2012	MEAN	73.2	22.9	24.4	121	-0.41
		SD	0.9	0.5	4.2	1	0.07
		MIN.	71.8	22.1	19.4	118	-0.53

		MAX.	74.6	23.7	36.3	122	-0.19
		COUNT	24	24	24	24	24
10	10 11 2012	MEAN	74.1	23.4	21.4	119	-0.68
		SD	0.5	0.3	2.6	1	0.18
		MIN.	73.4	23.0	17.4	116	-1.23
		MAX.	75.2	24.0	27.7	121	-0.46
		COUNT	24	24	24	24	24
11	10 12 2012	MEAN	73.6	23.1	22.6	120	-0.61
		SD	1.0	0.6	4.1	1	0.05
		MIN.	71.4	21.9	17.1	119	-0.71
		MAX.	74.9	23.8	34.6	122	-0.53
		COUNT	24	24	24	24	24
14	10 15 2012	MEAN	73.5	23.1	31.0	120	-0.54
		SD	0.4	0.2	3.6	0	0.04
		MIN.	73.1	22.9	18.6	119	-0.60
		MAX.	74.9	23.8	39.3	120	-0.45
		COUNT	25	25	25	25	25
15	10 16 2012	MEAN	73.4	23.0	25.9	120	-0.65
		SD	0.8	0.5	2.7	1	0.05
		MIN.	71.6	22.0	22.7	119	-0.72
		MAX.	74.7	23.7	34.0	121	-0.56
		COUNT	24	24	24	24	24
16	10 17 2012	MEAN	73.5	23.0	32.5	120	-0.59
		SD	1.2	0.7	3.1	0	0.04
		MIN.	71.2	21.8	23.5	119	-0.63
		MAX.	75.1	24.0	39.8	120	-0.49
		COUNT	25	25	25	25	25
17	10 18 2012	MEAN	73.1	22.8	29.6	120	-0.49
		SD	0.6	0.3	5.6	0	0.03
		MIN.	72.3	22.4	20.1	119	-0.62
		MAX.	74.6	23.7	42.1	120	-0.46
		COUNT	24	24	24	24	24
18	10 19 2012	MEAN	72.7	22.6	26.5	119	-0.58
		SD	0.6	0.3	2.5	1	0.22
		MIN.	71.4	21.9	20.1	118	-1.36
		MAX.	74.5	23.6	33.7	122	-0.39
		COUNT	25	25	25	25	25
21	10 22 2012	MEAN	73.5	23.0	35.0	120	-0.67
		SD	1.3	0.7	3.0	1	0.08
		MIN.	70.9	21.6	26.0	118	-0.88
		MAX.	75.2	24.0	43.1	121	-0.39

		COUNT	25	25	25	25	25
22	10 23 2012	MEAN	74.2	23.5	35.3	120	-0.64
		SD	0.6	0.4	1.4	1	0.06
		MIN.	73.0	22.8	33.1	119	-0.76
		MAX.	75.2	24.0	39.7	121	-0.52
		COUNT	24	24	24	24	24
23	10 24 2012	MEAN	73.9	23.3	35.5	120	-0.67
		SD	0.8	0.4	2.2	1	0.08
		MIN.	71.7	22.1	33.4	118	-0.88
		MAX.	74.7	23.7	42.9	121	-0.51
		COUNT	25	25	25	25	25
24	10 25 2012	MEAN	72.9	22.7	33.9	120	-0.64
		SD	0.9	0.5	0.9	1	0.08
		MIN.	71.6	22.0	32.8	119	-0.91
		MAX.	74.4	23.6	36.2	121	-0.53
		COUNT	25	25	25	25	25
25	10 26 2012	MEAN	71.8	22.1	31.7	120	-0.68
		SD	0.6	0.3	2.0	0	0.07
		MIN.	70.6	21.5	29.9	119	-0.89
		MAX.	73.8	23.2	38.5	121	-0.54
		COUNT	25	25	25	25	25
28	10 29 2012	MEAN	72.6	22.5	25.3	120	-0.61
		SD	1.2	0.7	3.6	0	0.09
		MIN.	71.4	21.9	21.1	119	-0.90
		MAX.	75.4	24.1	34.9	120	-0.53
		COUNT	25	25	25	25	25
29	10 30 2012	MEAN	72.3	22.4	23.8	120	-0.44
		SD	0.7	0.4	1.4	0	0.03
		MIN.	71.5	22.0	21.2	119	-0.54
		MAX.	73.6	23.1	27.2	120	-0.36
		COUNT	24	24	24	24	24
30	10 31 2012	MEAN	72.6	22.5	22.9	120	-0.47
		SD	0.5	0.3	1.1	0	0.05
		MIN.	71.7	22.1	21.5	120	-0.51
		MAX.	73.6	23.1	26.1	120	-0.28
		COUNT	24	24	24	24	24
31	11 01 2012	MEAN	72.4	22.4	21.9	120	-0.57
		SD	0.4	0.2	1.3	1	0.05
		MIN.	71.4	21.9	20.4	119	-0.66
		MAX.	73.1	22.8	26.3	121	-0.45
		COUNT	25	25	25	25	25

32	11 02 2012	MEAN	72.4	22.5	17.7	120	-0.62
		SD	0.6	0.3	1.4	0	0.03
		MIN.	71.6	22.0	16.1	119	-0.66
		MAX.	73.5	23.1	22.8	120	-0.52
		COUNT	23	23	23	23	23
35	11 05 2012	MEAN	72.4	22.4	18.3	120	-0.68
		SD	0.4	0.2	1.5	0	0.02
		MIN.	71.7	22.0	16.3	119	-0.71
		MAX.	73.1	22.8	21.7	120	-0.61
		COUNT	24	24	24	24	24
36	11 06 2012	MEAN	72.9	22.7	18.0	120	-0.67
		SD	0.5	0.3	1.0	0	0.03
		MIN.	71.6	22.0	16.2	119	-0.72
		MAX.	73.7	23.2	19.8	120	-0.61
		COUNT	25	25	25	25	25
37	11 07 12	MEAN	72.4	22.4	19.3	120	-0.64
		SD	0.7	0.4	1.3	0	0.03
		MIN.	71.1	21.7	17.1	119	-0.71
		MAX.	73.6	23.1	22.5	120	-0.61
		COUNT	25	25	25	25	25
38	11 08 12	MEAN	72.5	22.5	21.0	120	-0.75
		SD	0.5	0.3	1.7	0	0.06
		MIN.	71.8	22.1	17.1	119	-0.95
		MAX.	73.6	23.1	24.5	121	-0.64
		COUNT	24	24	24	24	24
39	11 09 12	MEAN	72.1	22.3	22.6	120	-0.72
		SD	0.7	0.4	1.4	0	0.05
		MIN.	70.3	21.3	19.9	119	-0.87
		MAX.	73.6	23.1	27.2	120	-0.62
		COUNT	25	25	25	25	25
43	11 13 2012	MEAN	72.8	22.6	16.8	120	-0.82
		SD	0.5	0.3	1.6	1	0.06
		MIN.	71.6	22.0	14.4	119	-0.89
		MAX.	73.4	23.0	20.8	121	-0.62
		COUNT	25	25	25	25	25
44	11 14 2012	MEAN	72.7	22.6	23.0	120	-0.83
		SD	0.5	0.3	2.0	0	0.05
		MIN.	71.3	21.9	15.7	118	-0.91
		MAX.	73.5	23.1	27.1	120	-0.73
		COUNT	25	25	25	25	25
45	11 15 2012	MEAN	72.7	22.6	20.5	120	-0.80

		SD	0.5	0.3	2.2	1	0.07
		MIN.	71.7	22.0	16.7	119	-1.02
		MAX.	73.8	23.2	24.4	120	-0.71
		COUNT	24	24	24	24	24
46	11 16 2012	MEAN	72.6	22.6	20.8	120	-0.79
		SD	0.6	0.3	1.4	0	0.03
		MIN.	71.5	22.0	18.8	120	-0.84
		MAX.	73.7	23.2	23.9	120	-0.71
		COUNT	25	25	25	25	25
49	11 19 2012	MEAN	72.7	22.6	20.1	120	-0.76
		SD	0.8	0.4	2.1	0	0.02
		MIN.	70.8	21.6	18.5	119	-0.81
		MAX.	73.8	23.2	29.1	120	-0.72
		COUNT	25	25	25	25	25
50	11 20 2012	MEAN	72.9	22.7	21.4	120	-0.23
		SD	0.6	0.3	1.1	1	0.23
		MIN.	71.5	21.9	20.0	119	-0.75
		MAX.	73.8	23.2	24.0	121	-0.06
		COUNT	25	25	25	25	25
51	11 21 2012	MEAN	72.6	22.5	23.1	120	-0.16
		SD	0.5	0.3	1.4	0	0.03
		MIN.	71.8	22.1	20.0	119	-0.25
		MAX.	73.5	23.1	25.7	121	-0.11
		COUNT	24	24	24	24	24
53	11 23 2012	MEAN	73.1	22.9	21.4	119	-0.11
		SD	0.4	0.2	1.7	0	0.02
		MIN.	72.3	22.4	19.3	119	-0.14
		MAX.	74.1	23.4	26.2	120	-0.07
		COUNT	25	25	25	25	25
56	11 26 2012	MEAN	73.6	23.1	18.5	120	-0.19
		SD	0.7	0.4	1.6	1	0.06
		MIN.	72.1	22.3	16.0	118	-0.28
		MAX.	74.6	23.7	23.2	121	-0.07
		COUNT	25	25	25	25	25
57	11 27 2012	MEAN	73.4	23.0	15.5	120	-0.22
		SD	0.5	0.3	2.0	0	0.03
		MIN.	72.2	22.3	13.4	119	-0.28
		MAX.	74.3	23.5	20.6	121	-0.15
		COUNT	25	25	25	25	25
58	11 28 2012	MEAN	74.0	23.3	15.1	120	-0.27
		SD	0.5	0.3	1.4	0	0.02

		MIN.	72.7	22.6	13.2	120	-0.31
		MAX.	74.7	23.7	18.8	121	-0.22
		COUNT	25	25	25	25	25
59	11 29 2012	MEAN	73.2	22.9	18.3	120	-0.28
		SD	0.8	0.4	2.5	0	0.05
		MIN.	71.1	21.7	14.3	120	-0.38
		MAX.	74.2	23.5	24.1	121	-0.20
		COUNT	24	24	24	24	24
60	11 30 2012	MEAN	73.8	23.2	17.8	120	-0.20
		SD	0.7	0.4	1.4	0	0.03
		MIN.	72.0	22.2	16.2	119	-0.25
		MAX.	74.9	23.8	21.1	120	-0.13
		COUNT	24	24	24	24	24
63	12 03 2012	MEAN	73.7	23.2	30.1	120	-0.10
		SD	0.5	0.3	2.6	0	0.04
		MIN.	72.2	22.4	19.6	119	-0.18
		MAX.	74.1	23.4	35.6	120	-0.07
		COUNT	25	25	25	25	25
64	12 04 2012	MEAN	73.3	23.0	34.3	120	-0.03
		SD	0.7	0.4	4.2	1	0.07
		MIN.	71.9	22.2	30.1	119	-0.15
		MAX.	74.2	23.4	46.3	121	0.13
		COUNT	25	25	25	25	25
65	12 05 20 12	MEAN	73.8	23.2	20.4	120	-0.21
		SD	1.1	0.6	5.3	0	0.05
		MIN.	71.7	22.1	17.7	119	-0.25
		MAX.	75.0	23.9	43.4	121	0.01
		COUNT	25	25	25	25	25
66	12 06 2012	MEAN	73.2	22.9	16.6	119	-0.21
		SD	0.4	0.2	1.2	0	0.06
		MIN.	72.0	22.2	14.7	119	-0.44
		MAX.	73.8	23.2	18.6	120	-0.13
		COUNT	24	24	24	24	24
67	12 07 2012	MEAN	72.7	22.6	30.1	120	-0.01
		SD	0.6	0.3	2.9	0	0.05
		MIN.	71.2	21.8	17.6	119	-0.16
		MAX.	73.8	23.2	36.8	120	0.03
		COUNT	26	26	26	26	26
70	12 10 2012	MEAN	73.5	23.1	21.1	120	0.04
		SD	0.8	0.4	4.0	0	0.07
		MIN.	71.4	21.9	18.7	120	-0.14

		MAX.	74.5	23.6	36.8	121	0.11
		COUNT	25	25	25	25	25
71	12 11 2012	MEAN	73.7	23.2	16.4	120	-0.34
		SD	0.5	0.3	1.8	0	0.05
		MIN.	72.2	22.3	14.2	119	-0.39
		MAX.	74.5	23.6	22.0	121	-0.13
		COUNT	25	25	25	25	25
72	12 12 2012	MEAN	73.8	23.2	14.9	120	-0.43
		SD	0.6	0.3	0.9	1	0.06
		MIN.	71.9	22.2	13.7	119	-0.59
		MAX.	74.5	23.6	17.6	123	-0.29
		COUNT	25	25	25	25	25
73	12 13 2012	MEAN	72.7	22.6	13.6	120	-0.45
		SD	0.5	0.3	0.4	0	0.06
		MIN.	71.7	22.1	12.9	119	-0.61
		MAX.	74.3	23.5	14.4	121	-0.38
		COUNT	24	24	24	24	24
74	12 14 2012	MEAN	72.6	22.6	16.8	120	-0.39
		SD	0.6	0.3	1.2	0	0.04
		MIN.	71.3	21.9	13.0	119	-0.43
		MAX.	73.4	23.0	20.3	120	-0.24
		COUNT	24	24	24	24	24
77	12 17 2012	MEAN	72.9	22.7	25.8	120	-0.13
		SD	0.6	0.3	2.3	0	0.04
		MIN.	71.8	22.1	16.4	119	-0.24
		MAX.	73.7	23.2	29.9	121	-0.09
		COUNT	24	24	24	24	24
78	12 18 2012	MEAN	73.7	23.1	19.1	120	-0.30
		SD	0.7	0.4	2.3	0	0.11
		MIN.	71.6	22.0	16.6	119	-0.50
		MAX.	74.5	23.6	26.4	120	-0.09
		COUNT	24	24	24	24	24
79	12 19 2012	MEAN	73.0	22.8	19.4	120	-0.27
		SD	0.6	0.3	0.7	0	0.03
		MIN.	71.4	21.9	17.9	119	-0.40
		MAX.	73.5	23.0	21.9	120	-0.21
		COUNT	25	25	25	25	25
80	12 20 2012	MEAN	72.1	22.3	26.5	119	-0.15
		SD	0.5	0.3	2.1	1	0.09
		MIN.	71.0	21.6	19.4	118	-0.39
		MAX.	73.5	23.0	28.9	120	-0.07

		COUNT	25	25	25	25	25
81	12 21 2012	MEAN	73.5	23.0	14.7	120	-0.18
		SD	0.8	0.5	3.1	0	0.03
		MIN.	71.3	21.8	13.3	119	-0.20
		MAX.	74.5	23.6	28.9	121	-0.07
		COUNT	25	25	25	25	25
84	12 24 2012	MEAN	72.6	22.5	20.0	121	-0.15
		SD	0.4	0.2	1.5	0	0.02
		MIN.	71.8	22.1	14.1	120	-0.18
		MAX.	73.2	22.9	23.1	121	-0.12
		COUNT	24	24	24	24	24
87	12 27 2012	MEAN	74.1	23.4	16.3	120	-0.35
		SD	0.8	0.5	1.6	1	0.05
		MIN.	71.9	22.2	14.2	119	-0.46
		MAX.	75.1	23.9	21.2	120	-0.17
		COUNT	24	24	24	24	24
88	12 28 2012	MEAN	73.9	23.3	17.7	120	-0.35
		SD	0.8	0.4	1.6	0	0.03
		MIN.	72.2	22.3	15.4	119	-0.46
		MAX.	74.9	23.9	22.9	120	-0.30
		COUNT	25	25	25	25	25
91	12 31 2012	MEAN	73.5	23.0	17.0	119	-0.37
		SD	0.8	0.4	1.1	0	0.02
		MIN.	71.3	21.9	15.8	119	-0.39
		MAX.	74.6	23.6	20.8	121	-0.30
		COUNT	24	24	24	24	24
93	01 02 2013	MEAN	74.7	23.7	14.2	120	-0.41
		SD	0.9	0.5	1.3	0	0.04
		MIN.	72.2	22.3	12.8	119	-0.53
		MAX.	75.8	24.4	18.1	120	-0.30
		COUNT	25	25	25	25	25
94	01 03 2013	MEAN	74.9	23.8	14.5	119	-0.39
		SD	0.9	0.5	1.3	0	0.06
		MIN.	72.5	22.5	12.4	119	-0.53
		MAX.	76.0	24.5	17.4	120	-0.31
		COUNT	25	25	25	25	25
95	01 04 2013	MEAN	72.6	22.5	17.1	120	-0.38
		SD	0.6	0.4	1.3	0	0.01
		MIN.	70.8	21.6	15.4	119	-0.39
		MAX.	74.2	23.5	21.1	120	-0.32
		COUNT	24	24	24	24	24

96	01 07 2013	MEAN	73.6	23.1	18.4	120	-0.45
		SD	0.9	0.5	1.4	0	0.03
		MIN.	71.8	22.1	16.7	119	-0.49
		MAX.	74.9	23.8	22.7	121	-0.38
		COUNT	25	25	25	25	25
97	01 08 2013	MEAN	72.8	22.7	19.1	120	-0.45
		SD	0.8	0.4	0.9	0	0.09
		MIN.	71.1	21.7	17.2	119	-0.62
		MAX.	74.4	23.6	20.8	120	-0.33
		COUNT	25	25	25	25	25
98	01 09 2013	MEAN	73.7	23.1	22.1	119	-0.45
		SD	0.6	0.4	0.9	0	0.03
		MIN.	71.9	22.2	20.1	119	-0.55
		MAX.	74.7	23.7	24.1	120	-0.41
		COUNT	25	25	25	25	25
99	01 10 2013	MEAN	73.5	23.0	17.8	119	-0.58
		SD	0.7	0.4	1.3	1	0.07
		MIN.	71.9	22.1	16.3	118	-0.73
		MAX.	74.6	23.6	21.2	120	-0.43
		COUNT	25	25	25	25	25
100	01 11 2013	MEAN	72.8	22.7	33.6	120	-0.23
		SD	1.0	0.5	4.9	0	0.06
		MIN.	70.6	21.5	17.4	118	-0.52
		MAX.	74.8	23.8	42.0	120	-0.19
		COUNT	25	25	25	25	25
103	01 14 2013	MEAN	74.9	23.9	14.6	119	-0.45
		SD	0.9	0.5	3.4	1	0.07
		MIN.	72.3	22.4	12.6	119	-0.50
		MAX.	75.7	24.3	28.4	122	-0.21
		COUNT	25	25	25	25	25
104	01 15 2013	MEAN	73.0	22.8	13.4	119	-0.49
		SD	0.7	0.4	1.0	0	0.04
		MIN.	71.0	21.7	12.4	119	-0.55
		MAX.	74.3	23.5	16.9	121	-0.35
		COUNT	25	25	25	25	25
		MEAN	73.2	22.9	22.7	120	-0.44
		SD	0.7	0.4	6.7	0	0.22
		MIN.	71.8	22.1	13.4	118	-0.83
		MAX.	74.9	23.9	37.5	121	0.04
		COUNT	70	70	70	70	70

Notes: Max = maximum; Min = minimum; ND = no data collected; SD = standard deviation

2000 mg/m^3 Inhalation Atmosphere Data

Exposure Day	Date	Data Type	2,000 mg/m^3				
			Temperature (° F)	Temperature (° C)	Relative Humidity (%)	Chamber Flow (L/min)	Static Pressure ("H2O)
1	10 02 2012	MEAN	71.9	22.2	37.8	119	-0.55
		SD	0.5	0.3	6.4	1	0.09
		MIN.	71.0	21.6	33.6	118	-0.77
		MAX.	72.4	22.5	56.3	121	-0.24
		COUNT	25	25	25	25	25
2	10 03 2012	MEAN	73.0	22.8	36.8	120	-0.55
		SD	0.7	0.4	3.4	1	0.16
		MIN.	71.1	21.7	33.9	118	-0.64
		MAX.	73.7	23.1	49.9	121	0.01
		COUNT	26	26	26	26	26
3	10 04 2012	MEAN	72.6	22.6	35.2	120	-0.57
		SD	0.6	0.3	2.7	1	0.16
		MIN.	71.1	21.7	33.2	118	-0.69
		MAX.	73.1	22.8	43.2	121	0.01
		COUNT	26	26	26	26	26
4	10 05 2012	MEAN	72.8	22.6	37.0	118	-0.47
		SD	0.6	0.3	3.7	7	0.25
		MIN.	70.7	21.5	33.7	83	-0.62
		MAX.	73.4	23.0	46.1	121	0.01
		COUNT	28	28	28	28	28
8	10 09 2012	MEAN	72.6	22.6	25.8	119	-0.56
		SD	0.6	0.3	2.1	2	0.23
		MIN.	71.3	21.8	23.5	116	-0.83
		MAX.	73.5	23.0	35.1	122	0.01
		COUNT	28	28	28	28	28
9	10 10 2012	MEAN	72.9	22.7	26.5	121	-0.63
		SD	0.8	0.4	5.0	1	0.08
		MIN.	71.0	21.6	21.7	118	-0.69
		MAX.	73.8	23.2	38.5	122	-0.26
		COUNT	24	24	24	24	24
10	10 11 2012	MEAN	73.1	22.9	25.9	120	-0.75
		SD	0.6	0.4	3.0	1	0.06
		MIN.	71.5	21.9	20.2	117	-0.84

		MAX.	73.9	23.3	32.0	122	-0.65
		COUNT	24	24	24	24	24
11	10 12 2012	MEAN	73.1	22.8	24.8	120	-0.81
		SD	0.6	0.4	3.6	0	0.03
		MIN.	71.5	21.9	20.0	120	-0.89
		MAX.	73.8	23.2	34.8	121	-0.75
		COUNT	24	24	24	24	24
14	10 15 2012	MEAN	73.1	22.8	32.3	120	-0.49
		SD	0.5	0.3	4.8	1	0.10
		MIN.	71.8	22.1	20.4	118	-0.75
		MAX.	73.8	23.2	46.2	121	-0.39
		COUNT	25	25	25	25	25
15	10 16 2012	MEAN	73.1	22.8	28.1	121	-0.48
		SD	0.7	0.4	2.2	0	0.05
		MIN.	71.4	21.9	25.5	120	-0.64
		MAX.	74.0	23.3	35.4	122	-0.39
		COUNT	24	24	24	24	24
16	10 17 2012	MEAN	73.0	22.8	30.8	120	-0.45
		SD	0.8	0.5	2.6	0	0.03
		MIN.	71.2	21.8	26.8	120	-0.53
		MAX.	74.0	23.4	39.1	121	-0.41
		COUNT	25	25	25	25	25
17	10 18 2012	MEAN	72.9	22.7	31.0	120	-0.41
		SD	0.6	0.3	6.1	0	0.03
		MIN.	71.2	21.8	22.2	119	-0.49
		MAX.	73.7	23.2	44.2	121	-0.37
		COUNT	24	24	24	24	24
18	10 19 2012	MEAN	72.6	22.5	27.5	120	-0.40
		SD	0.7	0.4	2.5	0	0.03
		MIN.	70.8	21.6	22.2	119	-0.46
		MAX.	73.6	23.1	34.1	121	-0.30
		COUNT	25	25	25	25	25
21	10 22 2012	MEAN	73.1	22.8	36.6	120	-0.52
		SD	0.8	0.5	2.8	1	0.06
		MIN.	71.3	21.8	26.1	119	-0.63
		MAX.	74.0	23.4	43.6	121	-0.30
		COUNT	25	25	25	25	25
22	10 23 2012	MEAN	73.5	23.1	38.5	120	-0.57
		SD	0.7	0.4	2.5	1	0.07
		MIN.	71.6	22.0	36.1	119	-0.79
		MAX.	74.2	23.5	48.4	122	-0.46

		COUNT	24	24	24	24	24
23	10 24 2012	MEAN	72.9	22.7	37.7	120	-0.56
		SD	0.7	0.4	2.3	1	0.05
		MIN.	71.1	21.7	35.7	120	-0.68
		MAX.	73.7	23.1	45.9	122	-0.47
		COUNT	25	25	25	25	25
24	10 25 2012	MEAN	72.6	22.6	36.1	120	-0.55
		SD	0.6	0.3	1.4	1	0.08
		MIN.	71.3	21.8	34.0	118	-0.87
		MAX.	73.3	23.0	39.8	121	-0.48
		COUNT	25	25	25	25	25
25	10 26 2012	MEAN	72.2	22.3	33.9	120	-0.58
		SD	0.6	0.3	2.9	1	0.04
		MIN.	70.5	21.4	30.6	118	-0.69
		MAX.	73.1	22.8	43.3	121	-0.52
		COUNT	25	25	25	25	25
28	10 29 2012	MEAN	73.0	22.8	25.9	121	-0.55
		SD	1.0	0.6	4.1	1	0.06
		MIN.	71.4	21.9	22.0	119	-0.68
		MAX.	75.1	23.9	34.6	122	-0.46
		COUNT	25	25	25	25	25
29	10 30 2012	MEAN	72.4	22.4	25.3	120	-0.47
		SD	0.5	0.3	1.5	1	0.09
		MIN.	71.5	21.9	23.1	119	-0.82
		MAX.	73.5	23.1	29.0	121	-0.35
		COUNT	24	24	24	24	24
30	10 31 2012	MEAN	72.5	22.5	24.9	120	-0.26
		SD	0.4	0.2	1.2	0	0.03
		MIN.	71.7	22.1	23.7	120	-0.36
		MAX.	73.5	23.1	28.2	121	-0.21
		COUNT	24	24	24	24	24
31	11 01 2012	MEAN	72.4	22.5	22.5	120	-0.30
		SD	0.4	0.2	1.4	0	0.05
		MIN.	71.2	21.8	20.9	119	-0.38
		MAX.	73.0	22.8	26.9	121	-0.23
		COUNT	25	25	25	25	25
32	11 02 2012	MEAN	72.6	22.5	17.6	120	-0.34
		SD	0.5	0.3	1.1	0	0.03
		MIN.	71.6	22.0	16.3	120	-0.38
		MAX.	73.2	22.9	21.9	121	-0.25
		COUNT	23	23	23	23	23

35	11 05 2012	MEAN	72.4	22.4	20.4	120	-0.41
		SD	0.4	0.2	2.2	0	0.03
		MIN.	71.2	21.8	16.7	120	-0.44
		MAX.	73.1	22.8	25.1	121	-0.32
		COUNT	24	24	24	24	24
36	11 06 2012	MEAN	72.6	22.5	20.0	120	-0.40
		SD	0.6	0.3	1.1	1	0.07
		MIN.	71.0	21.6	18.4	118	-0.65
		MAX.	73.2	22.9	23.3	122	-0.34
		COUNT	25	25	25	25	25
37	11 07 12	MEAN	72.4	22.4	19.9	120	-0.36
		SD	0.6	0.3	1.4	1	0.03
		MIN.	71.0	21.7	18.4	118	-0.41
		MAX.	73.1	22.8	24.6	121	-0.32
		COUNT	25	25	25	25	25
38	11 08 12	MEAN	72.7	22.6	22.2	121	-0.41
		SD	0.5	0.3	1.7	1	0.03
		MIN.	71.4	21.9	19.5	120	-0.46
		MAX.	73.4	23.0	27.0	122	-0.33
		COUNT	24	24	24	24	24
39	11 09 12	MEAN	72.3	22.4	23.1	120	-0.43
		SD	0.7	0.4	1.5	1	0.04
		MIN.	70.6	21.5	19.5	120	-0.49
		MAX.	73.4	23.0	28.4	122	-0.36
		COUNT	25	25	25	25	25
43	11 13 2012	MEAN	72.9	22.7	17.8	121	-0.54
		SD	0.6	0.3	2.1	1	0.12
		MIN.	71.4	21.9	15.7	120	-1.05
		MAX.	73.5	23.1	23.0	123	-0.38
		COUNT	25	25	25	25	25
44	11 14 2012	MEAN	72.9	22.7	23.7	121	-0.53
		SD	0.6	0.3	2.4	1	0.10
		MIN.	71.1	21.7	15.7	120	-0.93
		MAX.	73.4	23.0	29.0	124	-0.38
		COUNT	25	25	25	25	25
45	11 15 2012	MEAN	72.6	22.6	21.7	120	-0.48
		SD	0.5	0.3	1.8	0	0.03
		MIN.	71.1	21.7	18.0	120	-0.51
		MAX.	73.2	22.9	24.0	121	-0.40
		COUNT	24	24	24	24	24
46	11 16 2012	MEAN	72.6	22.6	23.0	120	-0.38

		SD	0.5	0.3	1.1	0	0.02
		MIN.	71.4	21.9	21.2	120	-0.41
		MAX.	73.2	22.9	25.4	121	-0.36
		COUNT	25	25	25	25	25
49	11 19 2012	MEAN	72.4	22.5	21.8	120	-0.47
		SD	0.6	0.4	1.8	0	0.03
		MIN.	70.9	21.6	20.3	120	-0.51
		MAX.	73.2	22.9	29.5	121	-0.36
		COUNT	25	25	25	25	25
50	11 20 2012	MEAN	72.7	22.6	22.5	120	-0.46
		SD	0.6	0.3	1.0	0	0.07
		MIN.	71.2	21.8	21.4	119	-0.71
		MAX.	73.5	23.0	25.8	121	-0.39
		COUNT	25	25	25	25	25
51	11 21 2012	MEAN	72.6	22.6	23.3	120	-0.44
		SD	0.4	0.2	1.6	0	0.03
		MIN.	71.8	22.1	20.9	119	-0.48
		MAX.	73.5	23.0	27.1	121	-0.39
		COUNT	24	24	24	24	24
53	11 23 2012	MEAN	72.8	22.7	22.2	120	-0.40
		SD	0.5	0.3	2.0	0	0.02
		MIN.	71.5	21.9	19.8	119	-0.43
		MAX.	73.5	23.1	28.3	120	-0.32
		COUNT	25	25	25	25	25
56	11 26 2012	MEAN	73.0	22.8	19.9	120	-0.43
		SD	0.6	0.3	1.6	1	0.04
		MIN.	71.5	22.0	17.7	119	-0.47
		MAX.	73.6	23.1	24.8	122	-0.32
		COUNT	25	25	25	25	25
57	11 27 2012	MEAN	72.9	22.7	15.7	119	-0.49
		SD	0.4	0.2	2.2	1	0.09
		MIN.	71.7	22.0	13.2	117	-0.88
		MAX.	73.5	23.0	21.2	122	-0.36
		COUNT	25	25	25	25	25
58	11 28 2012	MEAN	72.9	22.7	16.9	120	-0.50
		SD	0.5	0.3	1.6	0	0.03
		MIN.	71.5	21.9	13.2	120	-0.53
		MAX.	73.5	23.0	21.7	121	-0.41
		COUNT	25	25	25	25	25
59	11 29 2012	MEAN	72.7	22.6	19.2	121	-0.47
		SD	0.6	0.3	2.4	1	0.06

		MIN.	71.2	21.8	16.4	120	-0.56
		MAX.	73.3	22.9	24.9	122	-0.40
		COUNT	24	24	24	24	24
60	11 30 2012	MEAN	73.1	22.8	20.3	120	-0.47
		SD	0.6	0.3	1.4	1	0.03
		MIN.	71.5	21.9	17.6	120	-0.52
		MAX.	73.9	23.3	22.9	122	-0.41
		COUNT	24	24	24	24	24
63	12 03 2012	MEAN	72.9	22.7	33.3	120	-0.43
		SD	0.5	0.3	3.2	1	0.03
		MIN.	71.3	21.8	21.5	120	-0.46
		MAX.	73.4	23.0	41.0	122	-0.35
		COUNT	25	25	25	25	25
64	12 04 2012	MEAN	72.8	22.7	36.6	120	-0.43
		SD	0.5	0.3	3.9	1	0.08
		MIN.	71.1	21.7	32.4	118	-0.79
		MAX.	73.4	23.0	46.8	122	-0.35
		COUNT	25	25	25	25	25
65	12 05 20 12	MEAN	73.2	22.9	23.6	120	-0.51
		SD	0.8	0.4	4.4	1	0.03
		MIN.	71.5	21.9	21.1	118	-0.54
		MAX.	74.0	23.4	43.2	121	-0.44
		COUNT	25	25	25	25	25
66	12 06 2012	MEAN	73.0	22.8	18.6	120	-0.48
		SD	0.6	0.4	1.0	0	0.05
		MIN.	71.3	21.8	17.2	119	-0.61
		MAX.	73.7	23.1	21.6	121	-0.38
		COUNT	24	24	24	24	24
67	12 07 2012	MEAN	72.6	22.5	30.7	120	-0.36
		SD	0.5	0.3	2.7	0	0.08
		MIN.	71.2	21.8	19.3	118	-0.43
		MAX.	73.2	22.9	36.1	121	0.01
		COUNT	26	26	26	26	26
70	12 10 2012	MEAN	72.8	22.7	21.6	120	-0.28
		SD	0.6	0.3	3.6	0	0.06
		MIN.	71.3	21.8	19.2	118	-0.30
		MAX.	73.4	23.0	36.1	121	0.01
		COUNT	25	25	25	25	25
71	12 11 2012	MEAN	72.8	22.7	19.0	121	-0.36
		SD	0.6	0.3	1.9	0	0.07
		MIN.	71.1	21.7	17.0	120	-0.58

		MAX.	73.4	23.0	25.2	122	-0.28
		COUNT	25	25	25	25	25
72	12 12 2012	MEAN	72.9	22.7	15.9	120	-0.40
		SD	0.6	0.3	1.0	0	0.03
		MIN.	71.2	21.8	14.5	119	-0.44
		MAX.	73.5	23.0	18.7	121	-0.33
		COUNT	25	25	25	25	25
73	12 13 2012	MEAN	72.4	22.5	14.5	120	-0.41
		SD	0.4	0.2	0.8	0	0.03
		MIN.	71.4	21.9	13.4	119	-0.51
		MAX.	73.4	23.0	16.7	120	-0.35
		COUNT	24	24	24	24	24
74	12 14 2012	MEAN	72.1	22.3	17.5	120	-0.36
		SD	0.4	0.2	1.3	0	0.04
		MIN.	71.2	21.8	13.5	119	-0.39
		MAX.	72.7	22.6	21.4	121	-0.22
		COUNT	24	24	24	24	24
77	12 17 2012	MEAN	72.6	22.6	27.7	120	-0.26
		SD	0.5	0.3	2.6	0	0.01
		MIN.	71.7	22.1	17.2	120	-0.29
		MAX.	73.3	22.9	32.8	121	-0.22
		COUNT	24	24	24	24	24
78	12 18 2012	MEAN	73.2	22.9	21.5	121	-0.31
		SD	0.7	0.4	2.3	0	0.05
		MIN.	71.2	21.8	19.0	120	-0.49
		MAX.	73.7	23.2	27.2	122	-0.25
		COUNT	24	24	24	24	24
79	12 19 2012	MEAN	72.4	22.4	20.2	121	-0.31
		SD	0.6	0.4	0.9	0	0.02
		MIN.	70.7	21.5	19.1	120	-0.36
		MAX.	73.3	23.0	23.4	121	-0.27
		COUNT	25	25	25	25	25
80	12 20 2012	MEAN	72.1	22.3	28.0	121	-0.26
		SD	0.6	0.3	2.2	0	0.03
		MIN.	70.8	21.5	19.1	120	-0.31
		MAX.	73.1	22.9	30.4	121	-0.20
		COUNT	25	25	25	25	25
81	12 21 2012	MEAN	72.5	22.5	16.0	121	-0.27
		SD	0.5	0.3	3.1	0	0.02
		MIN.	71.1	21.7	14.5	120	-0.30
		MAX.	73.1	22.8	30.4	121	-0.20

		COUNT	25	25	25	25	25
84	12 24 2012	MEAN	72.7	22.6	22.1	121	-0.27
		SD	0.4	0.2	1.5	0	0.01
		MIN.	71.5	22.0	15.7	121	-0.29
		MAX.	73.2	22.9	23.9	122	-0.25
		COUNT	24	24	24	24	24
87	12 27 2012	MEAN	73.3	22.9	17.7	120	-0.35
		SD	0.6	0.3	1.7	0	0.02
		MIN.	71.8	22.1	16.0	120	-0.38
		MAX.	73.8	23.2	22.3	121	-0.27
		COUNT	24	24	24	24	24
88	12 28 2012	MEAN	73.0	22.8	18.5	120	-0.33
		SD	0.6	0.4	1.8	0	0.02
		MIN.	71.3	21.9	15.5	120	-0.38
		MAX.	73.7	23.2	23.3	121	-0.28
		COUNT	25	25	25	25	25
91	12 31 2012	MEAN	72.8	22.7	18.1	121	-0.34
		SD	0.7	0.4	1.3	0	0.02
		MIN.	71.0	21.7	15.5	120	-0.36
		MAX.	73.6	23.1	22.2	121	-0.28
		COUNT	24	24	24	24	24
93	01 02 2013	MEAN	73.3	22.9	14.9	121	-0.39
		SD	0.6	0.4	1.1	0	0.07
		MIN.	71.6	22.0	13.8	120	-0.68
		MAX.	74.0	23.3	18.8	122	-0.33
		COUNT	25	25	25	25	25
94	01 03 2013	MEAN	73.4	23.0	16.6	121	-0.39
		SD	0.7	0.4	1.4	0	0.03
		MIN.	71.5	22.0	14.1	120	-0.50
		MAX.	74.0	23.3	20.3	121	-0.34
		COUNT	25	25	25	25	25
95	01 04 2013	MEAN	72.3	22.4	17.5	121	-0.36
		SD	0.6	0.3	1.3	0	0.01
		MIN.	70.9	21.6	15.5	120	-0.38
		MAX.	73.5	23.1	21.4	121	-0.34
		COUNT	24	24	24	24	24
96	01 07 2013	MEAN	73.1	22.8	23.1	120	-0.43
		SD	0.5	0.3	3.4	0	0.03
		MIN.	71.7	22.1	16.8	119	-0.46
		MAX.	73.8	23.2	32.9	121	-0.34
		COUNT	25	25	25	25	25

97	01 08 2013	MEAN	72.7	22.6	20.6	119	-0.43
		SD	0.7	0.4	1.6	0	0.06
		MIN.	71.0	21.7	18.1	119	-0.64
		MAX.	73.7	23.2	23.7	120	-0.36
		COUNT	25	25	25	25	25
98	01 09 2013	MEAN	73.1	22.8	24.7	119	-0.42
		SD	0.6	0.3	1.6	0	0.02
		MIN.	71.3	21.8	18.1	119	-0.45
		MAX.	73.6	23.1	27.0	119	-0.38
		COUNT	25	25	25	25	25
99	01 10 2013	MEAN	73.1	22.8	19.8	120	-0.41
		SD	0.6	0.3	1.6	0	0.02
		MIN.	71.5	22.0	18.0	119	-0.44
		MAX.	73.8	23.2	24.0	121	-0.36
		COUNT	25	25	25	25	25
100	01 11 2013	MEAN	72.5	22.5	35.4	120	-0.29
		SD	0.5	0.3	4.5	1	0.02
		MIN.	71.2	21.8	20.2	118	-0.36
		MAX.	73.8	23.2	41.8	121	-0.25
		COUNT	25	25	25	25	25
103	01 14 2013	MEAN	73.7	23.2	17.1	121	-0.37
		SD	0.6	0.4	3.5	0	0.04
		MIN.	71.8	22.1	15.0	120	-0.40
		MAX.	74.4	23.5	32.1	123	-0.25
		COUNT	25	25	25	25	25
104	01 15 2013	MEAN	72.6	22.6	14.8	120	-0.43
		SD	0.5	0.3	1.1	1	0.07
		MIN.	71.3	21.8	13.7	119	-0.71
		MAX.	73.8	23.2	18.0	121	-0.28
		COUNT	25	25	25	25	25
		MEAN	72.8	22.7	24.3	120	-0.44
		SD	0.3	0.2	6.8	0	0.11
		MIN.	71.9	22.2	14.5	118	-0.81
		MAX.	73.7	23.2	38.5	121	-0.26
		COUNT	70	70	70	70	70

Notes: Max = maximum; Min = minimum; ND = no data collected; SD = standard deviation

APPENDIX B. IN-LIFE DATA

CLINICAL OBSERVATIONS

Exposure Day	Animal ID	Observation	
		Load	Unload
Control Group			
3	2	BW↓ ~7%	-
16	4	BW↓ >3%	-
16	16	BW↓ >3%	-
17	7	EC-L	-
18	7	EC-L	-
19	7	EC-L	-
20	7	EC-L	-
21	12	BW↓ >3%	-
21	18	BW↓ >6%	-
22	18	BW↓ >3%	-
29	141	EC-R	-
30	3	BW↓ >3%	-
30	141	-	EC-R
32	11	BW↓ >5%	-
32	16	EC-L	-
33	141	EC-R	EC-R
34	141	EC-R	EC-R
35	141	-	EC-R
42	12	-	EC-R
44	4	BW↓ >3%	-
44	17	BW↓ >3%	-
45	6	EC-R	RE-R
45	17	BW↓ >3%	-
46	8	EC-R	-
47	4	-	EC-R
49	6	BW↓ >3%	-
51	4	BW↓ >3%	-
51	6	BW↓ >3%	-
54	2	BW↓ >3%	-
54	4	BW↓ >4%	-
54	6	BW↓ >4%	-
54	12	BW↓ >3%	-
54	18	BW↓ >4%	-
56	8	BW↓ >3%	-
57	8	EC-R	-
61	6	-	EC-R
61	18	BW↓ >3%	-
65	20	BW↓ >3%	-
66	6	BW↓ >3%	-
67	8	-	EC-R
70	20	BW↓ >3%	-
24 BW observations, 34% from 2 rats (17% each); 17 EC observations, 29% from 1 rat			

Exposure Day	Animal ID	Observation	
		Load	Unload
200 mg/m^3 SB-8 Exposure Group			
15	36	BW↓ >3%	-
21	22	BW↓ >3%	-
24	40	-	EC-L
25	40	-	EC-L
29	38	Wet	-
30	38	BW↓ >4%	-
30	40	BW↓ >3%	-
32	33	BW↓ >3%	
34	36	EC-R	EC-R
35	23	-	EC-L
35	36	-	EC-R
36	28	-	EC-R
36	40	-	EC-L
38	23	EC-R	-
39	31	BW↓ >4%	-
39	38	-	EC-R
39	40	EC-R	-
43	24	EC-L	-
43	32	BW↓ >3%	-
45	32	-	EC-R
46	32	-	EC-R
47	23	EC-R	EC-R
48	23	-	EC-R
49	23	EC-R	EC-R
51	37	EC-L	NR
54	23	-	EC-L
54	37	EC-L	EC-L
54	40	BW↓ >3%	EC-L
55	37	EC-L	-
56	23	-	EC-L
56	26	BW↓ >4%	-
56	40	BW↓ >3%	NR
58	26	-	EC-R
59	40	-	EC-L
60	22	-	EC-R
61	22	-	EC-B
10 BW observations, 30% from 1 rat; 30 EC observations, 30% from 1 rat			
Exposure Day	**Animal ID**	**Observation**	
		Load	**Unload**
700 mg/m^3 SB-8 Exposure Group			
15	47	P-L	-
15	56	-	EC-R
16	47	EC-L	P-L
17	47	-	EC-L
18	47	EC-L	-
19	47	EC-L	-
19	56	-	EC-R
20	41	EC-R	-
20	47	EC-L	EC-L

20	48	-	EC-L, RE-L
20	52	BW↓ >3%	-
20	56	EC-R	EC-R
22	56	-	EC-R
23	41	-	EC-R
23	56	-	EC-R
24	41	-	EC-R
24	45	-	EC-L
24	47	EC-L	EC-L
24	56	-	EC-R
25	47	-	EC-L
25	56	EC-R	EC-R
25	143	-	EC-R
26	41	EC-R	EC-R
26	56	EC-R	-
27	41	EC-R	EC-R
27	47	-	EC-L
27	53	-	SQ-L
27	56	EC-R	-
27	57	-	SQ-R
28	49	-	EC-R
28	56	EC-R	EC-R
34	52	-	EC-R
39	54	BW↓ >3%	-
39	143	-	EC-R
40	47	-	SQ-R
40	143	EC-R	EC-R
43	52	BW↓ >3%	EC-L
43	54	BW↓ >4%	-
44	46	-	EC-R
45	45	-	EC-L
45	47	-	EC-R
46	46	-	EC-B
48	46	BW↓ >3%	-
52	45	-	EC-B
53	57	-	EC-R
54	50	BW↓ >3%	-
56	42	EC-R	EC-R
56	46	BW↓ >3%	-
57	42	EC-R	EC-R
58	46	-	P-B
58	48	-	EC-L
58	54	BW↓ >3%	-
58	58	-	EC-B
59	54	-	EC-R
59	59	-	EC-R
59	143	-	EC-L
61	46	RE-L	-
61	58	-	EC-B
62	42	-	EC-R
63	42	-	EC-R
64	44	-	EC-B
64	49	-	SQ-R

64	58	-	EC-L
66	45	-	EC-L
67	42	-	EC-R
68	42	-	EC-R
69	42	-	EC-R
8 BW observations, 38% from 1 rat; 63 EC observations, 38% from 2 rats (17%, 21%)			
Exposure Day	**Animal ID**	**Observation**	
		Load	**Unload**
2000 mg/m^3 SB-8 Exposure Group			
13	67	EC-L, P-L	-
14	79	-	EC-R, P-R
15	79	EC-R, P-R	EC-R, P-R
16	79	-	EC-R, P-R
17	79	EC-R	EC-R
19	63	-	EC-L, P-L
20	62	-	EC-R
21	74	-	SQ-L
23	68	BW↓ >4%	-
24	64	-	EC-R
25	75	-	EC-L
26	64	-	SQ-L
27	63	-	EC-L
28	64	EC-R	SQ-L
28	73	-	SQ-R
32	73	EC-R	-
36	64	-	EC-R
36	65	-	EC-R
36	73	-	EC-R
36	74	-	EC-R
36	75	-	EC-R
37	64	-	P-L, SQ-L
37	73	-	EC-R
37	75	-	EC-R
38	73	EC-R	-
39	61	-	SQ-L
39	63	-	EC-R
40	61	-	EC-L, SQ-L
41	64	-	SQ-L
42	64	EC-L	EC-B
43	62	BW↓ >3%	-
43	64	EC-R	-
43	68	BW↓ >3%	-
43	73	EC-R	EC-R
43	74	-	EC-R
43	77	-	EC-B
45	73	-	EC-R
47	64	-	EC-L
49	73	EC-R	EC-R
50	73	EC-R	-
51	65	-	EC-L
51	66	-	EC-R
51	68	BW↓ >3%	-

53	65	-	T-L
54	64	-	EC-R
54	65	EC-L	EC-L
55	65	EC-L	NR
56	64	EC-R	EC-R
56	65	EC-L	EC-L
57	77	-	EC-L
58	64	EC-R	EC-R, SQ-L
58	66	-	EC-R
58	72	BW↓ >3%	-
58	144	BW↓ >3%	-
59	64	-	EC-B
60	64	EC-R	EC-R
61	63	-	SQ-R
61	64	-	EC-R
61	75	-	EC-L
62	144	BW↓ >3%	-
65	78	-	EC-R
65	144	-	EC-L
66	68	BW↓ >4%	-
67	78	-	EC-L
68	66	-	EC-R
68	67	-	SQ-L
69	61	-	SQ-R
69	64	-	EC-R
8 BW observations, 50% from 1 rat; 60 EC observations, 45% from 2 rats (17%, 28%)			
Exposure Day	**Animal ID**	**Observation**	
		Load	**Unload**
Micronucleus Control Groups			
6	116	BW↓ >5%	-
11	106	-	EC-L, RE-L
14	93	-	EC-L, P-L
14	112	BW↓ >7%	-
15	99	EC-R, P-R	EC-R, P-R

Note: All observations are normal when marked by "-"; BW↓ = % body weight decrease from previous exposure day; EC = eye crust; ID = identification number; NR – nothing reported; P – porphyrin; RE = reddened eye; SQ = squinting eye; T = tearing; Wet = animal wet from water bottle at weighing time; -B = both, -L = left, -R = right

BODY WEIGHTS

Control Group Body Weights

						W1				W2
		Pre Exposure	10/2/2012	10/3/2012	10/4/2012	10/5/2012	10/9/2012	10/10/2012	10/11/2012	10/12/2012
Animal #	Sex									
1	M	180.52	199.6	198.74	197.46	199.74	209.4	212.61	213.92	214.29
3	M	159.75	171.37	174.5	175.15	176.2	182.87	184.97	186.36	190.07
5	M	167.21	177.06	180	181.95	183.18	193.42	195.81	197.35	201.3
7	M	173.18	186.38	189.71	191.98	191.81	206.16	210.59	212.56	213.84
141	M	171.04	186.03	190.74	194.54	193.75	208.28	208.63	209.87	212.63
11	M	186.57	200.56	205.68	207.16	208.93	219.22	223.4	222.86	225.1
13	M	192.44	209.01	210.35	214.57	214.97	228.16	227.78	229.41	230.09
15	M	185.63	197.75	200.23	204.63	204.12	215.53	215.94	217.52	218.73
17	M	189.66	206.18	205.27	207.85	210.5	218.92	221.51	221.68	222.2
19	M	191.76	203	210.37	209.71	210.72	220.8	221.34	223.62	224.93
2	F	127.46	135.81	138.82	128.28	140.31	145.99	150.66	149.08	149.82
4	F	116.87	127.04	125.98	128.23	127.68	131.34	133.39	135.03	132.44
6	F	121.32	132.8	133.33	133.25	133.92	139.92	141.32	139.89	141.27
8	F	124.57	133.38	134.45	134.12	137.65	140.06	144.83	144.37	144.23
10	F	117.14	124.3	126.75	127.92	129.89	135.04	137.21	137.55	138.9
12	F	123.04	131.24	132.76	135.71	134.49	142.77	144.48	144.99	145.19
14	F	129.24	134.84	136.93	138.5	138.31	142.69	142.78	144.91	143.77
16	F	121.12	130.85	128.88	132.41	134.24	140.96	142.19	141.49	143.92
18	F	128.65	132.27	134.02	135.85	134.95	137.79	139.66	138.76	137.52
20	F	118.41	129.48	130.33	131.47	132.27	135.9	138.4	140.4	140
All Avg Wt		151.28	162.45	164.39	165.54	166.88	174.76	176.88	177.58	178.51
					Lost >7%					
Male Avg		179.78	193.69	196.56	198.50	199.39	210.28	212.26	213.52	215.32
Female Avg		122.78	131.20	132.23	132.57	134.37	139.25	141.49	141.65	141.71

				W3					W4	
10/15/2012	10/16/2012	10/17/2012	10/18/2012	10/19/2012	10/22/2012	10/23/2012	10/24/2012	10/25/2012	10/26/2012	10/29/2012
221.69	225.6	224.02	226.1	225.93	233.9	232.81	235.57	235.42	237.54	244.17
197.92	198.39	202.47	200.7	205.28	214.03	216.08	217.1	219.71	220.33	225.91
210.16	211.72	212.6	216.95	217.95	225.82	230.33	227.82	232.27	235.04	239.06
220.86	223.49	225.73	227.49	229.42	236.44	238.42	236.67	235.99	240.03	247.9
218.81	219.02	219.49	224.68	227.69	234.03	237.14	236.07	236.28	238.32	246.55
231.8	231.83	234.08	235.02	237.32	242.12	246.22	246.37	247.48	251.95	254.72
236.75	237.06	238.51	240.74	240.7	247.4	250.57	250.42	250.05	255.19	266.03
226.63	232.2	229.29	233.28	233.24	238.55	239.72	242.01	242.51	243.99	255.02
230.26	230.78	230.88	232.1	232.42	240.73	243.75	241.73	244.98	245.02	251.71
232.92	229.75	233.42	236.75	235.58	241.2	244.74	246.69	245.22	248.65	252.85
155.9	154.54	154.06	156.52	158.4	163.29	164.1	161.9	161.7	164.03	167.59
138.99	140.03	139.56	139.69	140.48	144.3	147.87	143.27	146.06	144.18	145.96
146.95	147.21	147.05	147.94	151.66	156.45	156.55	155.6	154.21	154.51	161.41
147.09	150.11	149.6	150.62	151.59	156.86	157.17	156.7	159.3	158.58	164.43
143.06	145.72	144.46	147.57	147.81	151.12	152.24	150.41	150	152.62	158.75
151.8	150.72	151.13	154.91	154.85	157.78	160.16	157.88	157.6	158.39	162.77
148.18	147.86	147.33	149.77	147.98	152.33	154.71	154.05	154.14	153.73	159.71
150.72	151.12	150.12	151.18	152.15	156.64	161.05	154.94	155.56	157.84	161.91
141.77	141.71	141.03	140.7	140	147.29	149.19	146.71	147.95	150.63	151.73
144.67	145.27	144.03	145.39	146.64	149.95	149.77	149.55	147.2	151.05	153.46
184.85	185.71	185.94	187.91	188.85	194.51	196.63	195.57	196.18	198.08	203.58
							Lost > 3%			
222.78	223.98	225.05	227.38	228.55	235.42	237.98	238.05	238.99	241.61	248.39
146.91	147.43	146.84	148.43	149.16	153.60	155.28	153.10	153.37	154.56	158.77

			W5					W6		
10/30/2012	10/31/2012	11/1/2012	11/2/2012	11/5/2012	11/6/2012	11/7/2012	11/8/2012	11/9/2012	11/13/2012	11/14/2012
248.19	246.33	246.05	249.09	251.12	254.04	253.21	252.8	258.05	265.98	264.74
226.97	228.64	232.11	229.75	233.58	236.27	236.34	238.46	240.41	247.06	247.99
242.96	240.29	244.32	239.7	248.24	251.03	248.45	253.99	258.9	263.8	263.65
252.05	248.61	253.14	252.32	258.61	260.72	259.67	259.58	260.85	272.38	270.11
246.32	245.33	246.7	248.12	258.47	259.74	260.71	261.39	266.61	277.65	273.31
260.74	261.58	263.16	265.84	270.58	272.15	274.8	276.91	280.42	284.38	280.74
269	270.97	270.48	270.07	277.86	278.78	280.11	280.05	285.21	289.55	291.57
256.69	257.99	256.2	257.79	265.59	268.5	266.71	273.08	274.68	279.85	280.43
253.72	255.95	259.96	257.98	264.77	266.65	267.26	270.19	270.46	277.9	273.11
256.61	256.7	258.16	256.11	263.49	264.45	264.15	271.59	271.84	283.12	280.19
169.94	167.1	165.87	164.57	170.55	169.1	169.09	170.95	172.92	177.13	175.35
150.11	146.71	147.64	146.59	149.9	151.86	149	152.24	155.49	158.03	154.83
163.22	161.24	161.43	163.74	165.01	164.62	166.09	164.75	164.04	172.14	167.89
167.68	164.37	165.6	166.16	170.28	170.29	172.62	169.56	173.45	177.18	177.33
156.1	154.28	154.71	153.29	159	157.88	158.87	160.2	162.22	166.82	164.37
165.79	159.52	162.87	161.43	162.86	163.95	163.58	164.55	165.17	170.76	167.61
160.74	158.46	159.23	158.52	160.7	163.03	161.52	164.88	165.42	168.9	166.98
163.85	160.38	163.48	162.14	167.99	167.41	167.5	169.25	169.16	174.61	170.92
151.46	141.46	136.87	139.47	147.36	151.3	147.4	154.14	152.02	162.54	156.84
154.28	150.88	153.99	152.04	156	157.4	155	157.25	159.51	164.35	161.91
205.82	203.84	205.10	204.74	210.10	211.46	211.10	213.29	215.34	221.71	219.49
	Lost >3%	Lost >3%								
251.33	251.24	253.03	252.68	259.23	261.23	261.14	263.80	266.74	274.17	272.58
160.32	156.44	157.17	156.80	160.97	161.68	161.07	162.78	163.94	169.25	166.40

	W7				W8					W9
11/15/2012	11/16/2012	11/19/2012	11/20/2012	11/21/2012	11/23/2012	11/26/2012	11/27/2012	11/28/2012	11/29/2012	11/30/2012
267.13	268.8	272.89	271.22	273.56	276.39	280.59	280.81	282.88	278.5	282.51
247.08	246.05	250.1	256.25	254.17	255.95	260.28	263.16	259.99	259.7	256.96
264.63	264.02	267.33	269.74	272.14	275.27	278.95	280.92	279.74	280.1	281.72
268.99	271.07	277.8	281.34	278.13	281.67	288.09	290.78	290.51	287.94	289.3
276.34	279.13	282.81	282.77	282.05	284.32	295.65	292.63	291.28	292.34	293.63
286.56	272.31	290.44	289.69	294.42	299.99	304.12	304.16	308.7	309.51	308.31
293.11	290.74	298.64	299.4	300.44	302.66	306.04	310.87	308.22	307.21	308.39
282.32	285.66	287.94	292.59	293.56	294.56	298.12	301.66	298.31	299.54	302.49
278.84	279.55	284.03	287.29	285.85	288.57	291.38	294.68	292.68	290.14	293.78
283.76	286.75	289.07	294.1	293.44	295.45	301.3	305.04	301.67	300.25	304.17
174.58	175.99	177.24	177.92	177.35	179.33	181.71	182.5	180.73	180.61	178.77
156.96	156.28	157.65	159.55	157.55	160.32	163.17	163.43	160.97	160.58	159.75
172.96	171.92	174.39	178.59	174.34	177.49	181.36	183.69	179.62	179.78	178.98
176.65	176.75	179.69	178.91	179.98	180.71	186.09	187.64	184.72	185.27	183.05
169.51	166.86	170.95	172.14	169.82	171.97	174.69	173.12	171.77	172.13	174.74
167.15	169.03	170.18	172.25	172.13	174.39	174.1	181.44	176.75	176.05	172.69
169.85	168.58	170.62	173.27	171.36	173.26	173.39	175.4	172.58	173.14	173.45
172.71	172.27	174.61	175.48	172.22	179.32	180.05	181	178.97	180.58	179.78
155.2	154.71	159.5	159.51	159.14	162.46	162.58	168.66	166.48	163.96	163.49
165.83	163.32	167.01	168.05	167.11	168.07	169.82	172.46	172.58	169.23	168.73
221.51	220.99	225.14	227.00	226.44	229.11	232.57	234.70	232.96	232.33	232.73
	Lost ~5%									
274.88	274.41	280.11	282.44	282.78	285.48	290.45	292.47	291.40	290.52	292.13
168.14	167.57	170.18	171.57	170.10	172.73	174.70	176.93	174.52	174.13	173.34

				W10					W11	
12/3/2012	12/4/2012	12/5/2012	12/6/2012	12/7/2012	12/10/2012	12/11/2012	12/12/2012	12/13/2012	12/14/2012	12/17/2012
286.53	290.64	287.97	287.88	287.47	294.91	296.99	294.69	298.7	291.46	296.53
264.05	263.81	263.31	263.71	266.58	268.97	271.56	271.32	270.19	265.27	265.01
286.62	285.83	284.24	286.12	289.7	292.95	291.96	292.19	292.84	288.12	293.25
293.83	299.99	296.27	299.7	299.82	303.25	307.1	302.66	301.46	301.2	302.75
299.34	299.86	300.31	302.94	301.86	311.52	310.26	307.92	306.49	303.15	310.18
313.03	311.52	315.12	316.95	313.64	319.98	321.09	318.29	317.54	320.21	319.96
314.59	315.94	317.38	318.52	317.71	317.98	321.21	318.74	320.25	325.11	324.59
308.4	305.33	307.44	310.28	307.96	310.63	315.93	312.23	316.17	315.76	317.15
294.23	294.92	281.1	271.86	292.09	295.92	301.78	298.76	299.14	301.12	303.23
306.28	305.93	307.16	303.52	302.87	313.83	310.72	310.36	304.5	311.44	313.07
185.51	182.96	182	181	182.9	187.16	187.72	187.11	188.38	185.96	185.93
163.28	163.93	158.97	158.08	159.72	162.17	162.49	162.46	164	157.94	161.91
184.83	185.37	181	184.27	180.95	185.36	187.81	181.52	185.5	179.6	184.86
184.49	188.78	185.3	184.85	188.51	191.55	190.93	186.96	189.81	186.94	191.32
175.77	172.37	172.21	174.41	172.96	177.65	178.51	177.13	175.86	174.75	179.14
180.28	177.91	175.64	175.2	178.8	181.55	181.81	181.56	181.21	181.12	182.59
174.44	173.82	170.88	171.35	170.28	177.39	176.69	175.7	175.2	177.42	178.16
183.68	181.84	181.11	179.69	180.47	186.07	180.72	181.28	181.81	183.27	184.87
170	167.11	165.53	165.95	166.11	169.12	167.11	166.96	168.86	168.39	164.32
173.35	169.97	170	168.28	173.9	173.54	174.22	173.52	175.19	173.35	176.59
237.13	236.89	235.15	235.23	236.72	241.08	241.83	240.07	240.66	239.58	241.77
		Lost >3%	Lost >3%				Lost >3%		Lost >3%	
296.69	297.38	296.03	296.15	297.97	302.99	304.86	302.72	302.73	302.28	304.57
177.56	176.41	174.26	174.31	175.46	179.16	178.80	177.42	178.58	176.87	178.97

			W12			W13				W14
12/18/2012	12/19/2012	12/20/2012	12/21/2012	12/24/2012	12/27/2012	12/28/2012	12/31/2012	1/2/2013	1/3/2013	1/4/2013
298.93	295.56	298.4	297.1	302.2	301.71	303.01	307.9	310.38	309.55	308.61
266.99	264.23	264.91	264.56	268.47	267.49	271.58	279.38	275.11	279.02	276.99
298.73	294.31	296.91	294.86	300.81	298.03	300.37	310.95	306.58	309.51	310.23
307.04	303.35	306.09	306.8	309.43	305.54	310.32	318.1	316.7	315.04	314.52
310.33	307.88	312.63	309.35	314.82	317.53	319.18	324.71	323.86	325.06	323.36
320.77	318.45	323.47	326.22	325.06	328.47	329.37	331.46	333.11	333.42	330.55
324.4	323.67	325.42	327.48	330.26	332.7	333.46	328.98	340.55	341.02	341.71
318.34	317.49	316.34	320.77	321.45	322.36	320.08	329.98	327.45	326.98	327.15
302.77	302.51	304.68	304.3	309.34	306.44	308.55	313.05	314.51	310.7	311.59
312.23	309.69	309.97	314.67	312.68	313.38	313.95	323.9	322.56	322.28	323.24
191.21	185.11	184.34	184.79	192.61	190.89	190.03	195.18	194.54	190.76	193.45
168.23	160.81	160.52	160.21	168.71	165.37	166.56	170.28	170.22	166.54	166.64
189.78	180.65	185.76	183.55	188.63	185.98	185.62	191.7	187.35	187.25	187.98
192.37	192.48	195.16	188.41	195.92	191.55	191.89	196.29	195.45	194.5	192.61
177.61	176.46	179.58	176.65	182.2	180.84	180.48	185.3	187.03	185.82	185.12
183.15	176.82	179.21	181.15	182.66	183.76	182.4	182.44	185.67	184.25	182.39
176.77	176.05	175.46	180.21	177.3	177.83	176.7	175.87	179.57	176.39	175.11
187.46	184.79	180.88	187.27	186.25	184.58	185.74	192.35	190.9	186.7	186.72
170.47	163.4	164.81	165.77	168.4	166.08	166.62	175.99	170.71	173.94	170.57
176.48	174.48	174.86	177.17	173.46	173.93	176.16	178.26	180.27	174.99	175.26
243.70	240.41	241.97	242.56	245.53	244.72	245.60	250.60	250.63	249.69	249.19
	Lost >3%		Lost >3%				unload wt	Lost 3%		
306.05	303.71	305.88	306.61	309.45	309.37	310.99	316.84	317.08	317.26	316.80
181.35	177.11	178.06	178.52	181.61	180.08	180.22	184.37	184.17	182.11	181.59

				W15		W16	
1/7/2013	1/8/2013	1/9/2013	1/10/2013	1/11/2013	1/14/2013	1/15/2013	1/16/2013
						Rep 1 fasted	Rep 2 fasted
307.35	309.29	307.44	308.59	306.22	310.13	295.87	
275.85	282.84	276.79	279.42	277.29	280.3	274.39	
312.57	312.1	308.23	310.24	311.89	309.24	300.02	
315.85	317.15	316.42	313.58	316.3	313.54	304.42	
326.9	327.87	322.07	325.5	324.62	331.07	317.2	
333.32	332.17	331.02	329.51	331.13	332.02	333.31	320.15
344.57	342.6	341.92	342.75	344.56	343.32	346.92	330.7
334.69	334.73	332.62	328.67	333.55	334.72	335.89	322.63
312.82	314.47	310.06	311.57	313.36	311.02	312.37	297.17
321.02	320.22	321.74	319.02	317.18	323.62	320.81	306.14
195.02	195.68	190.02	191.9	189.83	196.23	190.19	
170.87	169.5	168.39	168.35	166.61	167.2	163.25	
188.31	193.86	187.03	189.5	189.53	192.5	182.67	
195.53	193.51	194.01	190.85	193.07	195.98	189.82	
186.91	183.82	186.46	184.88	187.29	187.28	177.4	
186.53	186.42	184.21	184.06	186.9	188.6	188.33	177.87
180.18	178.6	176.69	175.4	174.97	178.97	179.12	168.13
190.23	188.14	188.17	186.62	189.82	191.69	189.65	180.9
171.05	175.9	171.17	168.17	168.37	175.27	170.62	169.14
180.63	174.95	174.93	175.4	175.84	180.73	174.78	168.97
251.51	251.69	249.47	249.20	249.92	252.17	247.35	244.18
	Lost >3%	Lost >3%				Lost >3%	
318.49	319.34	316.83	316.89	317.61	318.90	314.12	315.36
184.53	184.04	182.11	181.51	182.22	185.45	180.58	173.00

200 mg/m^3 SB-8 Exposure Group Body Weights

						W1				W2	
		Pre Exposure	10/2/2012	10/3/2012	10/4/2012	10/5/2012	10/9/2012	10/10/2012	10/11/2012	10/12/2012	10/15/2012
Animal #	Sex										
21	M	164.08	175.86	180.15	182.04	183.68	189.59	196.06	193.75	198	204.64
23	M	189.2	199.61	200.7	201.04	206.48	214.09	216.35	219.1	217.43	223.69
25	M	161.6	182.46	184.59	190.29	191.5	203.65	209.67	208.08	210.47	216.64
27	M	178.22	195.23	197.95	201.26	203.14	215.49	218.35	220.62	221.03	228.11
29	M	189.07	203.86	208.09	208.98	213.4	220.53	224.3	223.09	225.91	230.99
31	M	192.93	205.96	209.02	211.69	213.32	219.49	223.45	224	221.59	226.86
33	M	173.39	190.36	195.1	198.26	199.53	212.52	213.75	214.14	216.11	222.07
35	M	177.83	192.92	196.69	198.73	201.18	210.48	217.4	215.86	218.77	226.12
37	M	167.92	180.21	180.01	183.07	186.15	189.59	191.28	192.34	192.58	198.58
39	M	181.34	196.41	199.9	200.49	203.16	212.72	214.9	214.57	216.18	222.53
22	F	119.16	128.61	128.85	130.11	132.01	136.44	138.14	137.58	138.79	143.56
24	F	124.73	130.7	135.51	135.48	135.26	140.38	141.49	139.08	141.58	144.58
26	F	117.48	125.1	125.51	126.61	127.52	132.19	133.38	135.44	133.12	137.74
28	F	123.32	130.39	128.51	133.54	135.49	137.51	139.23	139.15	138.75	143.21
30	F	128.53	135.86	139.28	139.51	139.03	145.46	148.19	147.1	144.66	152.18
32	F	125.57	133.22	136.59	135.51	135.76	145.33	142.65	144.64	143.31	148.25
34	F	117.67	125.07	126.76	127.24	127.54	133.44	134.67	134.25	134.08	139.81
36	F	129.25	135.72	136.92	137.88	139.84	143.17	143.3	145.73	144.12	145.89
38	F	133.92	137.65	140.32	142.45	144.87	149.79	151.79	152.86	150.86	154.57
40	F	110.33	117.74	118.41	119.82	119.3	123.98	125.83	123.8	124.97	130.78
All Avg Wt		150.28	161.15	163.44	165.20	166.91	173.79	176.21	176.26	176.62	182.04
Male Avg		177.56	192.29	195.22	197.59	200.15	208.82	212.55	212.56	213.81	220.02
Female Avg		123.00	130.01	131.67	132.82	133.66	138.77	139.87	139.96	139.42	144.06

			W3					W4		
10/16/2012	10/17/2012	10/18/2012	10/19/2012	10/22/2012	10/23/2012	10/24/2012	10/25/2012	10/26/2012	10/29/2012	10/30/2012
206.19	205.03	207.41	208.3	212.79	212.16	213.04	213.91	214.2	220.15	220.31
226.22	219.97	224.03	225.55	232.52	234.24	236.9	236.34	239.02	245.27	244.33
220.69	216.76	221.23	224.08	232.52	232.4	230.26	234.13	233.71	242.14	245.1
229.96	230.73	231.67	233.38	241.8	240.87	241.44	241.1	246.27	253.12	251
233.15	235.38	236.61	238.39	247.35	246.69	248.21	250.77	253.13	260.67	262.51
233.89	230.53	231.75	235.13	241.7	243.61	241.46	243.83	246.52	249.39	252.44
223.44	222.56	226.28	227.8	233.87	236.07	236.17	235.97	237.87	242.83	249.25
230.5	227.55	227.68	231.88	239.33	244.18	240.35	243.18	244.9	251.96	254.12
198.55	201.52	200.89	199.41	205.6	207.36	209.6	208.79	210.44	217.69	218.31
225.92	226.32	224.33	227.98	236.95	232.75	235.8	239.34	237.9	243.18	246.83
143.82	146.48	144.43	147.89	150.04	148.92	150.65	150.2	150.99	155.29	156.16
145.5	144.14	144.16	147.83	150.63	153.55	151.36	152.44	151.68	155.74	155.99
140.91	137.77	142.26	141.93	146.21	147.93	144.23	142.99	142.73	146.19	149.43
143.69	143.27	146.39	147.86	149.39	148.83	151.8	150.53	152.01	158.13	156.5
152.71	151.34	153.09	153.55	156.19	155.88	159.67	158.53	157.06	162.48	162.56
147.03	148.57	150.74	150.3	156.3	154.24	154.49	152.27	157.49	161.88	158.51
140.14	139.9	141.84	143	148.38	147.53	146.98	145.87	148.01	152.7	151.75
146.13	149.93	151.33	147.66	155.32	150.29	153.9	151.51	153.96	157.83	154.86
157.68	156.93	156.29	156.53	161.31	159.66	159.69	156.85	159.04	165.34	163.65
131.62	130.13	130.31	129.38	134.79	135.07	131.48	135.54	135.19	136.33	137.9
183.89	183.24	184.64	185.89	191.65	191.61	191.87	192.20	193.61	198.92	199.58
					Lost ~3%					
222.85	221.64	223.19	225.19	232.44	233.03	233.32	234.74	236.40	242.64	244.42
144.92	144.85	146.08	146.59	150.86	150.19	150.43	149.67	150.82	155.19	154.73

		W5					W6			
10/31/2012	11/1/2012	11/2/2012	11/5/2012	11/6/2012	11/7/2012	11/8/2012	11/9/2012	11/13/2012	11/14/2012	11/15/2012
219.11	218.9	219.29	219.39	218.96	219.36	220.41	222.39	232.15	230.35	231.62
246.6	247.22	247.26	252.21	253.33	252.77	256.33	257.64	262.93	262.19	266.42
242.8	245.32	244.31	249.57	250.18	249.64	253.59	257.9	262.11	260.42	264.08
251.55	251.79	249.03	256.03	261.51	265.27	261.93	266.81	276.79	275.8	277.85
263.75	262.66	265.93	267.35	267.29	268.23	271.7	272.77	281.5	281.29	284.34
255.07	258.92	254.9	262.22	258.61	263.51	260.98	263.11	273.01	268.77	271.18
246.96	247.91	251.99	256.84	257.6	257.01	263.12	261.84	268.28	267.61	270.33
256.28	253.63	257.41	260.91	261.98	262.94	264.06	265.46	273.26	273.34	277.35
216.91	216.54	221.25	221.68	224.05	223.75	223.77	227.67	234.1	235.61	233.49
245.53	245.74	243.83	248.48	252.33	251.31	251.09	254.33	261.51	261.51	266.63
151.33	155.77	156.69	156.77	157.34	157.35	158.1	158.84	162.39	165.06	163.42
154.63	155.67	153.88	159.13	158.83	158.99	159.39	159.14	164.3	161.28	162.56
145.26	147.59	146.01	148.05	150.34	148.79	148.96	150.15	154.83	153.94	154.69
153.91	156.75	155.92	158.24	156.43	159.48	159.13	161.03	164.55	162.48	165.46
159.82	159.95	159.06	162.85	163.07	164.37	165.7	166.45	166.87	170.23	168.55
158.77	157.27	157.9	159.11	157.1	157.44	156.87	161.4	167.25	164.85	167.36
150.94	151.07	150.95	153.96	154.36	153.49	153.49	156.65	156.89	154.04	158.59
154.19	158.63	158.95	161.51	160.35	163.72	163.45	166.08	166.49	165.96	168.19
164.41	165.35	161.07	167.56	168.23	168.09	169.54	165.03	176.65	169.57	174.25
134.06	134.95	135.84	138.44	140.26	141.48	142.19	140.8	149.54	144.85	148.39
198.59	199.58	199.57	203.02	203.61	204.35	205.19	206.77	212.77	211.46	213.74
Lost >3%										
244.46	244.86	245.52	249.47	250.58	251.38	252.70	254.99	262.56	261.69	264.33
152.73	154.30	153.63	156.56	156.63	157.32	157.68	158.56	162.98	161.23	163.15

W7				W8					W9	
11/16/2012	11/19/2012	11/20/2012	11/21/2012	11/23/2012	11/26/2012	11/27/2012	11/28/2012	11/29/2012	11/30/2012	12/3/2012
231.38	232.64	233.48	235.91	233.49	236.32	239.35	240.76	240.32	240.47	248.03
262.72	268.55	272.98	270.78	272.21	279.25	279.16	280.68	276.95	278.1	282.5
263.52	267.92	266.23	266.87	267.24	273.03	276.34	272.71	272.27	273.83	275.92
274.68	278.97	286.06	284.11	285.22	290.1	293	292.13	290.9	288.3	296.19
285.14	287.99	287.46	286.63	290.14	295.01	298.1	295.51	297.37	293.65	302.79
269.17	272.6	275.06	275.95	273.67	278.13	276.93	264.91	275.88	273.84	279.96
260.99	275.89	275.44	277.52	277.5	284.68	290.63	286.22	286.16	285.27	290.01
272.87	278.07	280.03	278.88	280.04	287.45	286.52	289.86	285.92	285.81	292.08
234.41	238.06	238.98	241.46	242.33	247.96	248.49	251.03	251.3	250.01	256.31
262.36	266.29	266.84	267.04	269.89	274.24	276.48	271.09	274.11	273.16	279.66
163.77	168.21	164.81	166.44	168.27	168.36	167.53	166.48	169.22	167.13	169.5
164.94	163.45	164.28	163.28	163.11	168.81	166.88	165.57	165.12	163.23	165.37
152.19	157.02	156.45	154.35	159.71	160.8	160.48	161.25	162.67	159.31	162.52
165.65	166.39	167.79	167.21	169.73	171.59	169.66	170.83	168.6	168.58	169.31
169.27	172.19	169.95	170.58	172.65	172.95	173.37	174.79	175.87	173.92	178.41
164.72	169.99	169.42	166.24	167.63	173.74	171.9	173.08	173.3	171.25	176.57
156.15	158.46	161.17	159.43	160.44	165.79	164.34	163.77	162.31	163.12	169.46
166.76	169.87	167.14	167.44	169.76	172.6	169.65	170.44	171.71	168.33	173.82
174.7	179.13	176.43	178.9	180.26	184.23	179.05	178.2	174.75	176.76	180.24
145.33	151.88	151.49	151.47	153.19	150.54	152.14	150.61	151.5	154.32	155.77
212.04	216.18	216.57	216.52	217.82	221.78	222.00	221.00	221.31	220.42	225.22
Lost >3%							Lost >4%			
261.72	266.70	268.26	268.52	269.17	274.62	276.50	274.49	275.12	274.24	280.35
162.35	165.66	164.89	164.53	166.48	168.94	167.50	167.50	167.51	166.60	170.10

			W10					W11		
12/4/2012	12/5/2012	12/6/2012	12/7/2012	12/10/2012	12/11/2012	12/12/2012	12/13/2012	12/14/2012	12/17/2012	12/18/2012
245.19	246.81	249.55	248.92	250.34	252.4	253.79	254.85	249.75	252.11	252.81
283.54	284.46	279.96	285.4	288.48	290.53	288.45	292.83	290	291.94	292.82
275.02	275.88	276.35	279.99	284.51	284.71	289.23	284.91	282.6	286.47	292.98
297.3	292.17	293.13	292.38	303.1	303.58	302.92	306.99	302.4	308.68	311.7
300.3	304.2	301.54	305.35	308.59	310.62	311.63	313.22	311.42	313.67	316.03
277.74	279.33	278.24	277.1	285.53	285.69	284.78	287.63	289.6	291.93	293.31
292.1	289.31	291.43	287.69	292.42	297.03	295.04	296.82	297.03	298.3	300.75
292.95	290.93	290.62	293.19	299.95	299.13	299.46	301.55	302.63	301.79	305.54
253.28	253.45	256.3	255.03	260.34	260.91	259.56	259.65	260.35	260.79	264.47
283.07	280.12	279.17	281.44	286.19	285.96	286.49	285.97	286.23	287.34	290.53
169.66	168.33	167.45	170.24	173.08	172.1	171.9	173.47	172.18	174.13	174.04
166.28	163.88	165.37	163.82	170.1	169.7	167.58	168.93	166.23	168.41	170.91
159.84	160.41	159.78	163.69	163.74	160.88	162	164.49	160.09	164.47	167.37
168.83	167.4	167.72	168.75	172.68	169.48	169.99	169.64	169.08	175.21	173.1
175.17	175.47	174.36	176.19	179.02	178.22	177.84	177.66	179.2	181.74	183.54
170.19	171.59	171.68	170.81	177.98	175.49	174.69	171.8	177.46	176.36	175.85
165.24	168.19	164.37	164.93	168.55	166.16	165.8	165.32	165.66	170.16	165.09
172.34	171.73	171.73	169.79	172.58	176.69	171.81	174.38	177.35	173.11	175.99
179.04	177.39	178.79	176.32	180.53	183.06	178.72	179.07	180.68	179.21	183.66
155.58	157.2	153.74	155.17	157.51	155.48	155.1	154.46	155.13	157.45	159.76
224.13	223.91	223.56	224.31	228.76	228.89	228.34	229.18	228.75	230.66	232.51
Lost >3%										
280.05	279.67	279.63	280.65	285.95	287.06	287.14	288.44	287.20	289.30	292.09
168.22	168.16	167.50	167.97	171.58	170.73	169.54	169.92	170.31	172.03	172.93

		W12			W13				W14		
12/19/2012	12/20/2012	12/21/2012	12/24/2012	12/27/2012	12/28/2012	12/31/2012	1/2/2013	1/3/2013	1/4/2013	1/7/2013	1/8/2013
253.75	253.61	253.85	257.48	260.34	260.99	262.87	264.93	261.66	261.93	266.91	265.99
292.72	295.51	294.79	300.78	302.69	298.74	305.7	304.98	304.79	309.86	311.16	308.49
292.42	294.35	293.52	300.02	298.46	300.7	302.63	303.84	305.34	305.67	310.9	307.3
309.79	304.57	309.01	320.27	316.95	319.96	321.54	321.96	322.09	322.16	325.31	326.37
316.17	316.24	314.01	326.79	321.37	324.21	329.52	332.01	332.42	332.38	333.57	333.9
291.7	291.15	291.35	298.24	290.42	294.66	294.29	296.69	294.62	297.73	295.61	297.66
297.98	301.84	301.9	309.06	307.32	311.01	312.42	314.5	314.96	314.44	317.47	315.75
305.32	307.52	308.36	317.33	315.16	313.51	317.38	318.39	317.52	318.49	322.04	323.07
262.67	264.06	263.98	274.62	272.04	271.28	274.71	279.29	275.25	277.68	282.24	278.68
291.55	292.13	292.82	299.16	295	296.27	300.04	304.65	306.26	302.86	304.57	304.6
170.51	173.39	172.98	177.71	177.48	176.69	180.02	177.98	179.04	177.43	180.19	180.62
167.3	169.51	169.52	172.64	170.08	171.06	175.15	173.17	173.07	173.97	173.02	173.84
163.84	164.33	157.64	168.31	164.75	168.8	167.54	171.68	166.76	168.14	169.09	169.17
173.05	174.99	170.75	177.4	176.6	175.07	179.46	179.66	178.79	179.53	178.48	178.2
180.91	182.26	179.31	183.83	182.71	179.87	185.59	183.92	186.26	187.83	189.46	187.89
175.14	179.42	178.49	181.03	177.18	176.85	178.83	179.14	179.74	181.22	184.54	180.45
166.86	168.76	165.96	172.42	169.61	168.1	171.66	170.87	170.84	172.31	172.15	172.52
172.45	177.23	173.4	178.26	173.31	173.9	178.93	181.28	177.55	179.3	183.32	178.91
180.65	184.15	186.54	188.67	186.4	186.79	188.59	186.45	188.64	187.66	190.2	189.62
154.81	160.84	155.75	161.72	161.26	159.33	164.28	161.11	161.63	161.37	162.62	161.34
230.98	232.79	231.70	238.29	235.96	236.39	239.56	240.33	239.86	240.60	242.64	241.72
Lost >3%		Lost >3%, #26 unload wt									
291.41	292.10	292.36	300.38	297.98	299.13	302.11	304.12	303.49	304.32	306.98	306.18
170.55	173.49	171.03	176.20	173.94	173.65	177.01	176.53	176.23	176.88	178.31	177.26

		W15		Final	
1/9/2013	1/10/2013	1/11/2013	1/14/2013	1/15/2013	1/16/2013
				Rep 1 fasted	Rep 2 fasted
267.58	266.46	270.2	272.45	261.62	
311.36	311.05	311.86	314.43	304.85	
308.35	307.8	306.5	310.45	304.35	
324.35	324.91	325.16	328.34	319.02	
336.12	333.45	331.03	338.09	326.96	
296.32	294.61	295.23	299.55	296.54	287.96
317.21	320.17	320.77	322.94	322.61	314.95
323.83	323.77	327.57	327.38	325.73	320.34
278.86	276.36	277.86	283.75	282.62	275.45
305.97	304.28	304.98	307.99	306.49	296.79
179.98	181.65	181.53	181.74	176.41	
176.87	174.71	172.99	175.72	172.95	
169.6	167.64	168.41	170.15	167.19	
177.78	178.28	179.88	180.77	177.09	
189.84	186.71	189.01	190.07	185.43	
184.95	181.81	181.7	185.63	181.24	178.57
172.61	173.32	171.72	176.47	171.93	167.48
181.41	179.53	181.05	185.18	185.43	177.15
187.74	189.18	185.89	192.32	188.55	184.52
161.29	163.54	164.07	167.09	167.56	158.48
242.60	241.96	242.37	245.53	241.23	236.17
307.00	306.29	307.12	310.54	305.08	299.10
178.21	177.64	177.63	180.51	177.38	173.24

700 mg/m^3 SB-8 Exposure Group Body Weights

						W1				W2	
		Pre Exposure	10/2/2012	10/3/2012	10/4/2012	10/5/2012	10/9/2012	10/10/2012	10/11/2012	10/12/2012	10/15/2012
Animal #	Sex										
41	M	181.33	194.35	195.36	196.26	198.45	207.35	209.78	208.85	208.39	215.26
143	M	191.98	208	208.7	207.1	208.1	218.93	219.22	221	220.05	226.98
45	M	189.81	203	206.09	209.45	209.4	219.45	219.73	221.32	222.88	227.63
47	M	186.65	199.56	201.8	202.92	205.5	214.41	216.4	217.37	216.92	222.17
49	M	186.48	197.99	201.45	206.08	205.1	216.36	221.01	222.68	225.23	230.78
51	M	199.1	212.01	214.87	216.35	219.56	228.76	230.82	231.12	232.38	242.45
53	M	175.44	186.61	192.03	192.03	194.67	204.05	207.3	206.08	206.18	213.34
55	M	184.63	199.68	203.02	202.87	206.43	216.6	219.34	219.95	221.39	228.69
57	M	194.6	209.01	213.22	214.51	216.17	223.48	223.49	224.97	227.04	230.61
59	M	195.68	209.95	214.39	217.04	218.25	229.22	228.04	227.16	228.34	233.76
42	F	131.08	139.02	138.94	140.47	142.66	147.26	146.3	148.01	147.05	154.96
44	F	129.34	135.65	139.18	140.35	140.25	145.27	145.38	143.32	145.05	147.96
46	F	123.12	127.05	128.26	131.31	129.72	135.29	135.86	135.03	134.24	140.4
48	F	122.65	126.47	129.23	129.81	130.34	135.77	135.65	134.95	134.95	139.7
50	F	102.45	115.55	121.03	121.32	123.94	133.38	137.41	137.49	139.77	145.81
52	F	126.23	138.89	134.99	137.27	140.2	146.05	146.95	145.32	145.12	150.33
54	F	124.24	134.97	136.1	139.09	138.14	146.12	147.81	148.73	147.72	153.51
56	F	117.88	126.24	127.09	127.38	130.88	133.19	136.72	137.9	139.58	144.6
58	F	116.17	123.73	125.61	124.68	125.89	131.99	134.23	136.61	133.69	139.69
60	F	125.17	132.36	134.45	134.7	135.69	141.27	141.37	140.45	143.44	147.52
All Avg Wt		155.20	166.00	168.29	169.55	170.97	178.71	180.14	180.42	180.97	186.81
Male Avg		188.57	202.02	205.09	206.46	208.16	217.86	219.51	220.05	220.88	227.17
Female Avg		121.83	129.99	131.49	132.64	133.77	139.56	140.77	140.78	141.06	146.45

			W3					W4		
10/16/2012	10/17/2012	10/18/2012	10/19/2012	10/22/2012	10/23/2012	10/24/2012	10/25/2012	10/26/2012	10/29/2012	10/30/2012
214.9	215.4	217.38	220	228.68	229.89	230.94	232.86	229.75	238.42	239
225.82	226.95	229.81	231.37	235.1	237.88	237.05	238.36	237.7	244.96	245.42
227.98	231.3	231.19	234.43	239.1	242.87	243.78	245.52	248.7	256.16	255.33
222.44	228.47	230.47	229.27	237.1	237.63	237.66	237.55	239.62	245.76	247.57
232.5	232.72	233.09	237.83	241.55	244.8	248.05	247.03	248.44	256.65	257.34
243.09	246.35	247.18	249.99	255.02	257.15	260.16	261.56	264.15	271.28	271.72
213.78	215.97	218.92	220.41	226.8	227.85	226.1	225.84	227.3	235.23	235.22
225.51	228.52	230.18	233.17	238.78	239.52	243.8	242.79	246.31	252.15	252.59
230.31	230.19	232.67	229.57	235.44	238.24	239.11	236.05	241.32	248.9	251.12
237.6	241.31	240.82	242.04	248.75	250.46	251.82	251.63	257.79	264.9	264.9
154.92	155.92	157.54	159.9	163.41	161.01	161.93	160.8	164.97	166.66	167.69
146.95	145.16	148.88	149.46	152.11	153.2	152.18	154.02	154.94	156.38	158.49
139.18	140.83	141.78	141.17	145.37	145.39	142.44	141.55	146.51	149.95	147.59
140.34	141.05	143.2	142.45	145.07	146.93	145.99	144.88	148.34	150.85	150.18
144.49	146.43	145.98	147.69	150.58	152.01	151.6	149.94	151.68	157.29	154.34
149.14	156.3	153.42	152.34	157.67	157.57	158.97	156.74	157.9	164.91	158.93
153.89	154.17	155.79	155.56	159.77	160.11	158.87	156.89	161.46	162.76	161.69
141.4	144.79	146.98	147.72	152.56	150.84	151.31	149.58	151.97	154.89	151.24
140.41	140.46	143.06	142.49	146.81	146.38	145.36	144.07	149.51	151.12	151.55
147.51	144.81	149.9	149.33	154.52	151.48	151.64	152.12	155.04	153.67	154.22
186.61	188.36	189.91	190.81	195.71	196.56	196.94	196.49	199.17	204.14	203.81
										Lost >3%
227.39	229.72	231.17	232.81	238.63	240.63	241.85	241.92	244.11	251.44	252.02
145.82	146.99	148.65	148.81	152.79	152.49	152.03	151.06	154.23	156.85	155.59

		W5					W6			
10/31/2012	11/1/2012	11/2/2012	11/5/2012	11/6/2012	11/7/2012	11/8/2012	11/9/2012	11/13/2012	11/14/2012	11/15/2012
238.18	238.65	242.86	244.64	247.43	247.58	247.68	250.69	256.46	257.21	255.8
242.37	244.72	242.17	249.05	248.69	252.47	250.95	252.24	259.69	257.65	260.02
257.21	258.92	260.18	263.75	263.32	263.92	268.16	274.57	283.43	282.13	286.59
245.28	245.01	245.65	250.01	254.94	254.67	253.11	259.81	263.42	263.45	263.13
261.43	261.33	263.94	265.88	267.52	270.97	269.13	270.9	280.4	280.38	279.64
272.5	273.61	276.88	284.05	279.25	285.48	287.61	288.02	295.91	295.05	298.84
234.9	236.06	236.03	241.37	240.71	244.47	246.95	247.56	257.02	257.15	258.43
255.36	258.09	255.63	263.94	261.61	264.88	263.04	267.7	277.28	279.14	280.08
248.2	250.7	248.64	253.87	256.78	256.07	257.66	260.48	268.36	265.43	264.78
266.03	265.57	265.98	269.64	274.11	274.95	274.43	279.94	285.06	282.22	285.46
165.95	169.95	168.03	172.78	170.33	170.98	171.04	171.92	175.65	174.82	175.76
156.29	156.28	158.85	158.09	158.23	158.89	158.65	157.69	162.8	162.44	161.22
147.7	147.24	146.24	151.23	147.35	149.61	151.83	150.67	155.8	153.59	155.77
149.51	148.03	150.13	152.42	152.09	154.13	151.4	152.47	158.7	157.21	158.49
156.56	159.25	154.69	159.18	159.45	157.68	162.24	159.21	164.61	162.88	166.2
160.5	162.04	164.54	167.43	164.65	167.66	169.32	165.06	170.41	172.21	170.87
160.28	161.12	160.29	165.46	164.73	162.32	163.56	163.13	171.1	167.44	169.44
154.05	153.64	153.65	156.64	156.42	155.54	159.02	157.85	162.6	159.62	164.59
150.66	149.64	148.17	151.62	152.96	152.59	153.88	155.14	158.32	155.21	157.71
155.75	155.12	152.69	158.8	156.98	158.2	157.64	157.61	165.06	164.84	164.08
203.94	204.75	204.76	208.99	208.88	210.15	210.87	212.13	218.60	217.50	218.85
252.15	253.27	253.80	258.62	259.44	261.55	261.87	265.19	272.70	271.98	273.28
155.73	156.23	155.73	159.37	158.32	158.76	159.86	159.08	164.51	163.03	164.41

W7				W8					W9	
11/16/2012	11/19/2012	11/20/2012	11/21/2012	11/23/2012	11/26/2012	11/27/2012	11/28/2012	11/29/2012	11/30/2012	12/3/2012
256.53	260.94	260.65	264.13	265.76	270.56	270.71	267.23	269.46	267.98	274.17
257.76	261.36	263.7	263.61	265.54	272.41	272.13	270.44	271.14	268.91	273.25
282.54	286.31	289.76	292.8	287.9	293.36	294.92	294.23	294.7	294.8	297.68
263.27	270.69	269.9	275.51	271.36	276.66	278.97	279.05	278.47	280.99	282.68
282.49	285.93	288.72	288.43	292.05	294.9	294.56	300.17	298.92	298.99	301.43
300.11	303.87	306.07	304.8	311.76	314.34	312.72	312.66	311.89	313.85	316.13
259.49	260.95	260.74	265.25	265.3	268.38	268.83	268.46	271.46	267.13	271.55
279.47	284.7	284.25	283.81	288.15	289.84	290.03	291.77	291.14	291.5	299.46
264.01	268	274.17	271.52	272.54	274.56	278.18	271.69	274.17	272.83	282.38
289.42	296.28	297.18	300.08	301.09	307.19	310.27	306.58	309.32	310.14	316.52
176.55	178.91	176.44	175.66	179.89	184.39	181.22	180.99	181.62	182.74	179.96
160.93	164.66	163.92	163.52	164.11	166	168.92	165.23	164.92	163.59	167.44
154.07	156.02	158.19	155.22	155.93	159.7	161.08	157.12	156.93	160.91	165.33
157.44	161.83	159.78	159.55	162.21	164.03	165.37	165.5	163.21	163.16	167.26
165.64	169.05	169.38	168.47	168.4	170.58	170.59	167.52	168.4	168.19	170.3
170.74	174.55	174.04	175.52	174.68	180.36	177.02	177.63	177.17	177.61	182.14
171.22	171.78	172.39	169.79	173.76	176.96	178.82	172.49	176.41	175.4	182.38
161.59	160.84	163.29	161.68	165.56	165.22	165.77	166.68	164.37	167.91	170.33
156.64	160.37	159.89	159.56	160.45	162.21	163.7	160.61	162.03	160.7	161.17
162.45	166.9	167.26	164.18	167.69	170.02	170.63	168.88	170.29	170.1	173.39
218.62	222.20	222.99	223.15	224.71	228.08	228.72	227.25	227.80	227.87	231.75
							Lost >3%			
273.51	277.90	279.51	280.99	282.15	286.22	287.13	286.23	287.07	286.71	291.53
163.73	166.49	166.46	165.32	167.27	169.95	170.31	168.27	168.54	169.03	171.97

			W10					W11		
12/4/2012	12/5/2012	12/6/2012	12/7/2012	12/10/2012	12/11/2012	12/12/2012	12/13/2012	12/14/2012	12/17/2012	12/18/2012
274.17	272.88	274.64	274.41	280.8	277.97	280.02	277.77	277.35	282.54	286.57
273.12	273.16	270.87	270.94	274.76	275.79	279.56	280.92	277.37	283.82	283.91
299.17	299.11	301.99	301.59	306.2	306.8	308.47	307.51	308.64	309.55	312.24
283.94	285.08	283.72	285.18	288.42	288.04	292.96	292.48	289.87	297.35	300.09
301.13	302.39	300.03	300.59	306.21	308.69	307.02	308.33	307.28	311.44	316.01
314.09	317.24	321.07	320.35	328.32	323.26	324.5	324.24	328.45	333.73	335.34
275.1	272.85	271.59	273.6	277.52	278.68	274.47	278.41	278.77	283.33	288.38
294.26	296.07	297.52	293.99	298.3	300.44	303.5	301.22	302.42	305.58	307.66
278.32	282.64	277.66	277.72	282.8	285.04	280.21	282.3	282.7	282.49	282.71
312.05	312.36	312.93	315.14	319.32	318.35	317.81	320.02	323.96	322.39	327.7
179.73	180.07	182.22	179.85	184.82	182.96	183.68	181.36	180.26	183.44	183.55
165.9	165.06	164.21	165.64	169.76	168.53	169.36	167.36	168.73	171.26	173.72
160.82	159.7	157.96	159.08	166.23	160.11	159.56	160.61	160.02	166.13	163.66
163.54	162.09	162.2	163.3	166.2	163.35	165.14	164.01	163.73	169.49	168.02
168.3	168.31	170.45	168.84	176.38	173.54	173.51	171.98	169.78	173.39	177.85
175.91	177.18	177.13	177.82	183.69	182.2	181.34	182.98	179.92	183.07	181.5
174.15	175.52	176.58	178.49	183	179.44	176.62	177.87	180.19	177.35	182.41
167.2	167.29	167.43	169.08	171.69	170.66	168.87	172.4	169.47	170.26	174.06
162.15	162.93	160.77	161.76	167.94	163.16	163.95	161.79	164.69	163.04	166.73
171.66	170.52	168.08	171.26	174.67	170.55	168.62	174.02	174.59	174.63	176.2
229.74	230.12	229.95	230.43	235.35	233.88	233.96	234.38	234.41	237.21	239.42
Lost >3%					Lost >3%					
290.54	291.38	291.20	291.35	296.27	296.31	296.85	297.32	297.68	301.22	304.06
168.94	168.87	168.70	169.51	174.44	171.45	171.07	171.44	171.14	173.21	174.77

		W12			W13				W14		
12/19/2012	12/20/2012	12/21/2012	12/24/2012	12/27/2012	12/28/2012	12/31/2012	1/2/2013	1/3/2013	1/4/2013	1/7/2013	1/8/2013
282.45	284.93	283.53	291.49	287.52	288.51	293.67	293.66	288.23	290.85	293.37	292.2
283.67	288.39	287.08	292.11	294.72	296.88	296.59	298.44	298.69	300.33	297.77	300.82
312.79	310.49	312.8	318.63	318.52	316.93	320.2	324.47	324.15	321.47	326.2	326.63
299.3	300.5	297.79	304.89	303.81	306.07	306	308.5	309.48	308.37	312.39	313.35
319.47	317.78	317.4	324.28	325.29	324.41	329.84	331.25	326.93	326.68	329.85	328.9
333.57	335.77	337.43	345.3	343.2	344.95	349.84	352.44	350.13	355.07	357.99	358.12
280.38	285.61	287.84	291.25	291.46	294.24	298.51	300.42	298.74	295.03	301.92	302.04
305.79	306.61	306.87	310.88	312.81	315.3	317.59	318.06	320.12	318.71	321.31	323.26
279.57	286.17	283.9	294.59	289.68	287.08	289.44	295.83	291.02	291.18	296.23	295.43
327.13	326.53	328.85	333.4	337.6	334.1	341.24	341.33	337.43	336.42	345.14	342.51
179.71	184.21	182.52	186.44	187.62	188.78	192.91	193.83	190.12	191.59	197.29	194.75
172.61	172.19	170.78	175.86	174.2	172.58	175.92	177.75	175.62	175.98	180.43	178.37
162.86	167.18	161.22	166.61	165.34	165.84	171.4	166.91	169.88	169.72	171.4	170.77
167.37	169.14	167.1	172.61	170.62	170.43	173.7	174	174.28	173.73	177.43	173.99
172.23	173.44	174.32	178.36	177.73	175.41	182.47	177.37	179.22	179.27	181.83	182.74
178.73	182.41	183.45	182.53	182.69	182.19	187.06	184.33	186.02	184.26	187.26	185.44
178.61	181.47	177.88	186.67	180.79	179.93	185.44	183.71	181.02	183.76	181.95	185.88
169.84	171.94	171.09	174.44	175.87	177.74	177.55	178.23	175.32	175.77	177.55	177.6
162.05	167.74	164.56	167.6	165.62	164.3	167.72	168.17	166.01	167.77	169.29	168.42
171.77	177.51	174.05	179.38	176.12	175.18	176.33	178.04	176.3	179.33	180.73	179.19
237.00	239.50	238.52	243.87	243.06	243.04	246.67	247.34	245.94	246.26	249.37	249.02
Lost >3%		Lost >3%		Lost >3%							
302.41	304.28	304.35	310.68	310.46	310.85	314.29	316.44	314.49	314.41	318.22	318.33
171.58	174.72	172.70	177.05	175.66	175.24	179.05	178.23	177.38	178.12	180.52	179.72

		W15		Final	
1/9/2013	1/10/2013	1/11/2013	1/14/2013	1/15/2013	1/16/2013
				Rep 1 fasted	Rep 2 fasted
290.5	292.24	291.69	298.89	284.46	
299.19	298.94	300.26	304.61	289.52	
327.26	327.04	324.32	329.42	323.53	
314.47	314.45	317.37	316.17	302.19	
331.54	330.43	329.75	335.33	324.55	
355.05	354.17	355.53	357.27	353.95	342.21
300.23	297.95	303.29	305.91	302.53	295.16
321.28	319.55	323.49	321.97	323.11	313.9
297.78	293.12	291.14	295.6	297.57	282.45
344.16	340.92	342.88	348.06	345.6	331.6
195.72	193.45	194.06	197.11	190.09	
176.1	176.55	178.65	179.7	174	
169.81	168.53	169.63	171.01	167.95	
176.08	173.44	175.7	176.31	168.37	
181.61	183.22	179.16	184.76	175.58	
186.46	185.63	187.17	188.52	190.2	180.75
185.88	184.49	186.78	187.59	183.17	180.13
178.18	175.91	177.97	178.14	179.15	171.68
169.68	168.08	169.33	173.08	170.02	165.96
178.83	177.38	178.39	180.88	178.95	172.77
248.99	247.77	248.83	251.52	246.22	243.66
318.15	316.88	317.97	321.32	314.70	313.06
179.84	178.67	179.68	181.71	177.75	174.26

2000 mg/m^3 SB-8 Exposure Group Body Weights

						W1				W2	
		Pre Exposure	10/2/2012	10/3/2012	10/4/2012	10/5/2012	10/9/2012	10/10/2012	10/11/2012	10/12/2012	10/15/2012
Animal #	Sex										
61	M	188.82	201.51	205.49	206.6	204.52	217.85	216.85	218.99	218.65	225.48
63	M	172.4	186.3	188.84	190.05	191.16	197.04	200.06	200.55	203.3	207.18
65	M	182.3	196.6	198.85	200.01	201.79	212	213.4	214.87	215.69	222.44
67	M	177.18	193.44	193.03	193.84	194.88	206.82	205.36	206.2	206.58	211.96
69	M	190.97	206.79	209.81	210.37	209.96	218.67	219.99	219.57	221.98	227.73
71	M	191.75	206.38	210.07	208.34	212.4	220.65	225.33	221.18	225.67	230.39
73	M	180.64	194.77	198.65	197.51	198.87	210.87	210.15	208.92	210.87	219.19
75	M	167.33	184.14	187.1	187.09	190.66	201.22	208.74	206.74	208.27	213.2
77	M	181.42	194.41	197.55	196.81	201.49	209.96	208.75	210.93	210.56	219.03
79	M	187.87	203.29	206.5	209.26	214.33	224.62	226.74	224.43	229.68	233.9
62	F	110.65	118.81	119.74	119.85	121.48	129.62	129.28	128.92	129.59	135.99
64	F	123.93	132.82	134.73	133.72	134.12	141.08	138.47	139.12	140.75	142.32
66	F	118.65	125.8	128.12	126.38	128.43	134.92	135.01	135.79	139.77	141.23
68	F	123.05	128.12	129.73	129.37	130.43	133.98	135.71	136.03	135.42	138.6
70	F	121.22	128.2	130.48	131.06	131.94	136.04	137.37	136.87	138.29	141.39
72	F	119.93	129.97	133.11	132.17	135.57	138.66	142.51	140.12	139.36	146.08
74	F	119.56	131.38	129.86	131.02	132.56	134.02	137.79	138.72	138.1	142.06
144	F	123.6	129.47	131.51	132.85	133.62	136.76	136.68	137.98	138.73	141.85
78	F	125.13	131.65	131.96	132.8	134.5	140.01	138.48	141.24	142.89	142.4
80	F	127.89	131.51	138.06	135.64	136.26	142.46	143.37	142.33	141.81	147.53
All Avg Wt		151.71	162.77	165.16	165.24	166.95	174.36	175.50	175.48	176.80	181.50
Male Avg		182.07	196.76	199.59	199.99	202.01	211.97	213.54	213.24	215.13	221.05
Female Avg		121.36	128.77	130.73	130.49	131.89	136.76	137.47	137.71	138.47	141.95

			W3					W4		
10/16/2012	10/17/2012	10/18/2012	10/19/2012	10/22/2012	10/23/2012	10/24/2012	10/25/2012	10/26/2012	10/29/2012	10/30/2012
225	229.45	229.35	230.69	237.32	236.23	242.11	240.56	242.51	251.52	255.4
208.11	207.44	210.88	210.1	217.26	217.79	218.17	220.09	223.04	227.44	231.92
223.14	224.4	228.51	227.92	232.58	234.92	231.75	234.87	238.13	244.38	245.1
214.44	214.89	218.01	219.44	225.99	226.1	224.82	225.51	229.28	233.33	238.14
228.55	227.99	232.15	232.79	239.41	242.43	243.41	245.35	247.77	252.92	254.51
232.82	235.59	237.39	238.96	247.13	250.16	249.69	248.73	252.64	262.66	262.43
218.85	220.17	221.63	223.47	231.19	229.43	233.01	231.33	234.86	240.46	239.83
216.13	220.06	221.32	222.12	227.36	230.5	230.68	231.23	233.48	242.05	242.47
218.55	216.73	222.36	222.74	229.4	232.56	232.48	231.72	236.38	241.44	243.44
238.77	238.51	240.97	239.5	250.04	250.3	249.52	248.33	251.32	258.74	262.37
133.58	137.31	138.08	137.02	143.49	142.76	143.18	141.34	145.12	152.08	151.54
143.11	141.56	143.02	142.64	149.38	147.09	147.33	147.91	146.38	151.74	152.89
143.77	145.23	146.68	148.4	155.02	152.52	153.22	153.71	153.25	159.67	158.61
144.12	140.65	143.88	142.54	146.93	146.93	145.87	144.41	149.03	152.6	152.08
143.94	141.56	143.96	144.61	148.41	148.77	148.46	148.19	148.5	151.42	153.23
147.73	146.4	148.81	148.48	153.04	156	153.92	154.3	153.96	156.88	160.71
139.51	141.3	142.29	142.66	150	146.87	146.77	149.87	149.58	151.65	150.49
144.02	144.02	145.37	143.7	149.49	147.69	149.83	150.85	150.62	152.5	152.5
144.03	147.03	147.96	146.34	152.66	150.6	150.93	151.8	154.3	158.37	160.27
148.31	150.79	150.66	149.25	156.81	155.95	152.97	153.95	153.26	160.83	160.72
182.82	183.55	185.66	185.67	192.15	192.28	192.41	192.70	194.67	200.13	201.43
222.44	223.52	226.26	226.77	233.77	235.04	235.56	235.77	238.94	245.49	247.56
143.21	143.59	145.07	144.56	150.52	149.52	149.25	149.63	150.40	154.77	155.30

		W5					W6			
10/31/2012	11/1/2012	11/2/2012	11/5/2012	11/6/2012	11/7/2012	11/8/2012	11/9/2012	11/13/2012	11/14/2012	11/15/2012
253.21	253.92	250.26	260.04	260.45	262.21	260.81	263.91	271.08	275.78	276.94
230.15	230.51	233.99	237.01	239.25	240.58	242.95	246.46	253.32	252.96	251.73
246.53	248.04	248.34	250.88	254.47	255.72	256.96	259.02	267.13	264.12	266.38
235.89	237.27	239.03	241.32	243.54	245.88	247.51	246.08	257.85	255.08	257.02
254.85	257.24	256.26	260.6	264.25	269.01	266.31	269.41	276.64	280.98	277.78
260.1	262.29	261.09	268.61	272.37	271.14	272.33	271.71	283.57	279.69	279.13
245.99	244.19	243.34	248.54	250.91	253.01	251.32	256.06	257.93	261	261.82
244.39	243.77	243.74	251.77	252.28	251.45	254.32	256.68	262.31	266.26	264.06
238.98	241.95	247.06	249.06	250.17	250.58	251.65	249.62	255.68	257.79	259.6
261.56	266.24	267.13	271.61	274.26	277.48	277.45	280.79	287.51	286.04	288.73
149.42	148.6	150.3	152.07	152.41	153.16	152.53	153.93	158.28	153.67	157.91
149.52	150.44	149.48	154.65	152.19	149.81	153.14	153.28	159.54	155.67	156.6
156.79	161.2	156.59	162.35	162.67	160.38	162.55	162.87	170.41	167.93	167.54
149.63	153.02	146.7	152.28	155.02	154.43	154.37	156.19	159.82	156.91	158.08
151.53	150.48	149.95	152.71	153.59	153.79	155.56	153.79	159.08	159.3	160.36
157.06	157.65	158.3	161.33	159.62	159.66	159.38	164.02	166.3	165.08	164.42
151.18	152.4	149.71	153.46	151.6	151.86	151.29	155.04	155.72	155.14	156.6
154.36	158.75	155.88	153.57	151.38	154.88	154.02	155.74	155.76	155.12	154.81
157.56	158.55	156.47	159.36	159.72	161.67	160.62	162.11	165.04	163.97	165.17
156.68	158.45	156.76	160.12	163.23	161.18	162.69	163.49	168.29	167.31	169.37
200.27	201.75	201.02	205.07	206.17	206.89	207.39	209.01	214.56	213.99	214.70
		Lost >~~4%~~								
247.17	248.54	249.02	253.94	256.20	257.71	258.16	259.97	267.30	267.97	268.32
153.37	154.95	153.01	156.19	156.14	156.08	156.62	158.05	161.82	160.01	161.09

W7				W8					W9	
11/16/2012	11/19/2012	11/20/2012	11/21/2012	11/23/2012	11/26/2012	11/27/2012	11/28/2012	11/29/2012	11/30/2012	12/3/2012
275.65	279.3	282.44	281.38	282.26	289.89	286.47	285.42	288.73	288.35	289.81
251.2	253.91	257.44	260.98	260.4	264.39	269.17	267.25	267.48	268.56	272.3
267.38	274.41	276.8	276.42	279.24	279.89	281.63	283.43	280	284.87	286.97
261.27	265.26	266.03	268.66	265.37	270.96	276.35	274.39	274.64	278.51	279.72
277.54	281.98	283.82	284.53	287.51	287.39	291.88	288.49	292.16	295.71	299.45
284.45	284.37	284.69	285.8	291.36	293.51	292.98	292.12	292.43	295.07	297.49
261.87	266.48	268.24	270.18	270.69	274.59	273.43	277.74	275.77	277.1	286.55
268.07	271.6	274.36	274.32	278.05	279.46	278.37	274.66	275.03	276.85	278.23
260.1	264.24	265.87	264.48	266.18	267.37	270.35	270.84	269.17	270.37	277.35
289.98	295.23	297.29	296.43	301.11	303.41	303.18	302.84	304.4	303.03	309.37
156.75	158.79	160.45	155.84	157.61	162.77	160.85	158.1	158.95	160.59	163.44
157.4	163.23	161.24	159.53	160.28	161.56	160.58	160.99	160.06	158.55	164.65
169.87	171.5	169.43	173.19	172.22	176.69	174.51	174.48	173.72	174.03	177
160.31	160.57	161.07	160.5	165.66	167.43	167.81	166.47	164.32	165.81	172.03
158.62	160.5	162.13	162.13	162.77	166.43	167.77	166.08	164.71	166.22	165.83
163.05	166.82	168.22	168.08	170.1	171.71	170.83	169.1	167.83	170.76	172.33
158.5	158.61	160.68	159.81	162.24	163.99	164.8	163	161.07	163.12	162.31
157.24	158.66	156.33	160.39	159.86	162.07	161.15	162.59	162.22	159.29	164.29
167.19	169.62	166.7	168.38	171.17	174.12	171.59	170.21	172.12	172.34	173.95
172.18	174.79	170.84	170.31	171.48	174.8	173.03	173.42	177.44	174.55	179.62
215.93	218.99	219.70	220.07	221.78	224.62	224.84	224.08	224.11	225.18	228.63
269.75	273.68	275.70	276.32	278.22	281.09	282.38	281.72	281.98	283.84	287.72
162.11	164.31	163.71	163.82	165.34	168.16	167.29	166.44	166.24	166.53	169.55

			W10					W11		
12/4/2012	12/5/2012	12/6/2012	12/7/2012	12/10/2012	12/11/2012	12/12/2012	12/13/2012	12/14/2012	12/17/2012	12/18/2012
290.22	290.93	290.41	292.89	301.83	299.27	298.21	298.48	296.85	299.76	304.41
273.04	271.36	271.96	275.79	277	279.73	282.65	281.67	280.28	284.13	285.88
288.05	288.98	287.47	289.68	295.46	294.54	294.02	295.71	289.69	296.07	303.22
278.69	277.99	276.79	282.33	283.9	289.68	288.29	285.17	288.41	292.42	291.4
298.32	300.58	298.03	297.94	300.92	304.37	302.61	304.32	303.64	307.9	310.12
299.09	299.33	295.79	300.57	305.36	303.34	305.96	302.98	307.18	307.24	310.68
281.63	281.61	284.03	284.03	289.85	288.23	289.43	287.64	290.73	290.71	293.16
278.79	277.94	280.68	281.59	286.62	289.37	289.04	289.79	287.73	290.94	293.08
271.81	274.43	273.62	277.31	277.26	279.29	274.67	278.4	279.69	281.34	283.83
310.67	313.64	309.09	312.95	317.75	320.53	318.56	315.15	318.39	316.18	320.04
158.44	161.55	158.38	159.73	167.33	164.15	164.52	162.01	162.83	166.08	169.09
163.49	160.65	158.96	164.22	166.22	162.84	164.52	162.73	159.59	166.2	166.95
173.69	174.29	175.7	176.45	179.29	180.71	178.01	176.39	173.94	182.29	180.7
166.22	166.62	165.67	167.15	170.92	166.98	170.13	172.2	166.99	170.33	170.63
163.69	165.7	164.12	166.02	168.92	167.85	170.35	168.5	166.2	170.22	171.36
171.58	168.51	170.92	171.73	174.82	172.82	172.98	173.02	174.13	176.06	174.42
160.47	160.17	160.6	159.7	164.49	164.37	163.89	163.2	163.38	163.21	165.76
159.56	161.06	165.11	166.92	165.44	165.8	164.69	162.24	164.92	166.95	168.47
171.55	171.88	173.33	173.92	175.34	174.09	174.54	174.52	177.73	175.93	175.53
176.79	176.23	175.32	177.98	181.52	183.7	181.69	183.22	182.9	186.07	184.42
226.79	227.17	226.80	228.95	232.51	232.58	232.44	231.87	231.76	234.50	236.16
Lost >3%								Lost >3%		
287.03	287.68	286.79	289.51	293.60	294.84	294.34	293.93	294.26	296.67	299.58
166.55	166.67	166.81	168.38	171.43	170.33	170.53	169.80	169.26	172.33	172.73

		W12			W13				W14		
12/19/2012	12/20/2012	12/21/2012	12/24/2012	12/27/2012	12/28/2012	12/31/2012	1/2/2013	1/3/2013	1/4/2013	1/7/2013	1/8/2013
300.76	306.11	304.43	313.99	311.06	307.02	313.28	311.83	308.67	309.24	313.74	319.41
284.38	286.73	285.53	289.61	292.94	294.35	298.28	298.77	300.15	300.66	302.45	305.67
295.61	298.05	299.7	305.55	308.72	308.01	312.96	313.77	311.9	314.12	317.2	321.52
291.88	293.95	295.75	302.22	302.96	308.02	311.62	310.79	309.46	310.16	316.36	315.35
308.84	308.97	310.76	320.32	318.52	323.16	324.57	324.17	323.1	320.77	325.33	326.67
308.15	310.25	308.19	315.71	314.62	316.96	321.28	319.49	320.5	319.19	325.58	330.29
298.12	298.52	303.24	301.56	304.83	309.29	310.9	312.75	311.65	316.52	316.38	315.25
294.96	297.2	293.09	302.48	303.27	302.93	310.9	308.21	308.25	310.39	311.96	315.36
284.9	284.46	285.38	292.32	291.53	291.96	299.23	293.53	297.13	295.8	303.43	304.17
321.09	320.92	325.11	330.31	332.39	332.33	336.96	339.8	336.71	337.61	339.11	344.88
164.26	169.08	166.75	172.01	168.57	168.25	171.08	169.22	168.81	171.36	172.82	172.38
168.94	166.91	165.47	173.15	170.54	168.94	172.64	170.52	171.8	173.1	172.98	175.12
176.84	179.88	179.65	184.58	182.15	181.2	185.83	184.99	183.82	182.69	186.61	186.61
170.7	170.77	166.99	176.93	171.76	173.15	177.68	177.38	178.11	174.97	176.91	181.74
169.27	171.57	170.17	178.06	173.25	174.88	175.36	177.13	174.39	173.57	176.31	177.63
178.87	175.5	175.6	184.83	177.92	180.74	182.74	183.51	183.3	182.91	185.5	185.73
162.51	163.88	162.04	165.3	164.97	166.45	169.29	169.23	168.2	168.15	170.64	171.36
165.53	164.33	166.75	173.25	166.72	169.21	171.58	173.48	167.84	169.29	175.6	175.89
175.02	180.15	178.48	180.24	179.99	181.66	182.57	182.91	181.54	181.24	188.15	186.78
182.65	182.1	182.18	190.48	186.68	183.16	188.7	189.7	185.73	182.56	192.36	189.73
235.16	236.47	236.26	242.65	241.17	242.08	245.87	245.56	244.55	244.72	248.47	250.08
				Lost >3%				Lost >3%			
298.87	300.52	301.12	307.41	308.08	309.40	314.00	313.31	312.75	313.45	317.15	319.86
171.46	172.42	171.41	177.88	174.26	174.76	177.75	177.81	176.35	175.98	179.79	180.30

		W15		Final	
1/9/2013	1/10/2013	1/11/2013	1/14/2013	1/15/2013	1/16/2013
				Rep 1 fasted	Rep 2 fasted
313.67	314.19	315.34	318.81	304.95	
304.99	303.42	306.3	308.41	298.43	
319.19	319.25	319.85	320.51	312.14	
318.26	316.35	315.94	321.75	309.65	
325.2	323.55	323.11	328.02	314.3	
328.73	326.77	327.47	329.75	327.69	318.81
317.92	321.13	322.63	325.6	322.64	313.16
309.27	309.91	309.26	314.32	313.24	300.13
300.36	301.51	302.21	304.74	303.78	296.92
340.93	338.11	339.04	343.07	340.77	333.36
171.23	172.1	167.93	172.82	165.71	
172.93	171.39	176.22	176.88	168.19	
182.8	186.55	185.48	189.23	181.98	
174.33	175.32	174.97	178.53	173.86	
174.81	172	174.02	174.72	169.42	
185.47	181.18	182.76	186.65	181.98	177.09
170.89	170.26	170.21	171.12	171.15	165.63
173.01	170.89	168.67	174.54	169.51	165.97
185.13	185.6	186.55	192.49	189.56	183.21
186.77	186.17	191.63	188.07	190.1	179.32
247.79	247.28	247.98	251.00	245.45	243.36
Lost >4%					
317.85	317.42	318.12	321.50	314.76	312.48
177.74	177.15	177.84	180.51	176.15	174.24

Food Consumption: Week 1

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	10/1/2012	10/2/2012			10/3/2012			10/4/2012			10/5/2012			10/6/2012	10/7/2012	10/8/2012	10/9/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
1	C				884.49	871.78	12.71	871.74	857.17	14.57	857.17	842.9	14.27	842.9				775.43	67.47
2	C				906.64	896.64	10	896.67	888.95	7.72	888.95	871.36	17.59	871.36				824.57	46.79
3	C				822.77	812.8	9.97	812.82	800.84	11.98	800.84	788.16	12.68	868.07				810.29	57.78
4	C				886.47	879.41	7.06	879.37	867.76	11.61	867.76	858.94	8.82	858.94				812.13	46.81
5	C				959.92	947.5	12.42	947.5	933.65	13.85	933.65	922.85	10.8	922.85				862.98	59.87
6	C				880.76	872.31	8.45	872.28	861.26	11.02	861.26	852.89	8.37	852.89				800.02	52.87
7	C				871.98	861.03	10.95	861.03	848.2	12.83	848.2	835.73	12.47	886.87				818.81	68.06
8	C				854.57	845.31	9.26	845.37	834.89	10.48	834.89	824.98	9.91	869.64				816.02	53.62
141	C				898.97	885.53	13.44	885.54	870.12	15.42	870.12	856.47	13.65	901.7				834.12	67.58
10	C				886.53	878.03	8.5	878.06	867.49	10.57	867.49	858.42	9.07	858.42				808	50.42
11	C							860.04	844.92	15.12	844.92	830.73	14.19	872.19				803.54	68.65
12	C							830.98	820.21	10.77	820.21	809.98	10.23	860.96				804.82	56.14
13	C							806.97	790.34	16.63	790.34	775.75	14.59	861.57				783.36	78.21
14	C							879.51	868.18	11.33	868.18	859.13	9.05	917.26				865.29	51.97
15	C							884.91	868.2	16.71	868.2	854.48	13.72	882.61				813.86	68.75
16	C							829.67	819.95	9.72	819.95	808.84	11.11	867.56				811.91	55.65
17	C							887.87	872.4	15.47	872.4	858.75	13.65	945.22				874.49	70.73
18	C							868.42	858.65	9.77	858.65	850.81	7.84	889.89				841.19	48.7
19	C							840.54	825.04	15.5	825.04	809.88	15.16	852.18				782.89	69.29
20	C							794.27	783.55	10.72	783.55	774.15	9.4	852.9				798.78	54.12
Male Average Daily Consumption				14.62		Female Average Daily Consumption					10.64								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	10/1/2012	10/2/2012			10/3/2012			10/4/2012			10/5/2012			10/6/2012	10/7/2012	10/8/2012	10/9/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
21	L				871.53	859.26	12.27	859.31	846.17	13.14	846.17	834.16	12.01	862.97				804.27	58.7
22	L				918.42	910.38	8.04	910.39	898.94	11.45	898.94	889	9.94	931.12				881.73	49.39
23	L				872.79	858.36	14.43	858.44	842.95	15.49	842.95	828.04	14.91	861.73				793.67	68.06
24	L				931.55	920.75	10.8	920.71	909.75	10.96	909.75	901.43	8.32	944.2				892.85	51.35
25	L				884.79	870.16	14.63	870.19	853.89	16.3	853.89	840.52	13.37	869.72				802.37	67.35
26	L				866.39	859.07	7.32	859.09	848.03	11.06	848.03	839.37	8.66	864.96				817.23	47.73
27	L				894.09	881.37	12.72	881.38	865.9	15.48	865.9	851.75	14.15	851.75				782	69.75
28	L				886.22	875.42	10.8	875.44	864.77	10.67	864.77	854.9	9.87	881.95				831.88	50.07
29	L				856.27	841.32	14.95	841.3	824.84	16.46	824.84	810.46	14.38	843.85				775.94	67.91
30	L				884.6	873.23	11.37	873.23	861.56	11.67	861.56	852.77	8.79	875.74				822.87	52.87
31	L							825.77	810.22	15.55	810.22	795.56	14.66	862.26				798.18	64.08
32	L							843.12	834.02	9.1	834.02	825.71	8.31	878.74				822.13	56.61
33	L							852.56	837.64	14.92	837.64	823.14	14.5	869.31				799.87	69.44
34	L							881.26	872.46	8.8	872.46	864.27	8.19	864.27				812.93	51.34
35	L							814.27	801.44	12.83	801.44	789.25	12.19	846.21				779.41	66.8
36	L							832.43	821.88	10.55	821.88	811.69	10.19	854.59				801.07	53.52
37	L							812.87	799.61	13.26	799.61	786.64	12.97	879.05				818.1	60.95
38	L							803.46	791.67	11.79	791.67	781.77	9.9	855.23				801.75	53.48
39	L							793.18	778.71	14.47	778.71	766.39	12.32	870.83				802.33	68.5
40	L							805.18	795.58	9.6	795.58	788.2	7.38	839.61				792.22	47.39
Male Average Daily Consumption				14.79		Female Average Daily Consumption					10.47								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	10/1/2012	10/2/2012			10/3/2012			10/4/2012			10/5/2012			10/6/2012	10/7/2012	10/8/2012	10/9/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
41	M				854.6	838.33	16.27	838.27	823.49	14.78	823.49	811.24	12.25	892.33				826.65	65.68
42	M				939.2	930.11	9.09	930.1	917.69	12.41	917.69	907.44	10.25	958.74				902.79	55.95
143	M				899.43	885.62	13.81	885.61	870.98	14.63	870.98	858.47	12.51	898.61				831.72	66.89
44	M				943.94	934.77	9.17	934.83	923.24	11.59	923.24	913.16	10.08	913.16				855.44	57.72
45	M				895.45	885.18	10.27	885.2	867.95	17.25	867.95	853.4	14.55	894.82				823.92	70.9
46	M				850.11	841.49	8.62	841.55	829.89	11.66	829.89	821.91	7.98	899.3				851.9	47.4
47	M				828.42	814.75	13.67	814.74	799.92	14.82	799.92	785.3	14.62	840.85				775.67	65.18
48	M				852.51	843.05	9.46	843.06	832.36	10.7	832.36	823.08	9.28	858.3				808.45	49.85
49	M				890.66	876.98	13.68	877.01	861.44	15.57	861.44	847.5	13.94	916.58				848.91	67.67
50	M				850.36	839.93	10.43	839.92	829.58	10.34	829.58	820.21	9.37	883.49				830.28	53.21
51	M							830.42	814.4	16.02	814.4	800.3	14.1	846.01				773.56	72.45
52	M							812.06	802.6	9.46	802.6	792.68	9.92	904.24				849.71	54.53
53	M							947.58	934.54	13.04	934.54	921.8	12.74	956.41				895.32	61.09
54	M							821.79	807.88	13.91	807.88	798.81	9.07	864.8				809.58	55.22
55	M							808.47	794.19	14.28	794.19	780.46	13.73	847.47				780.29	67.18
56	M							781.25	771.79	9.46	771.79	762.86	8.93	918.03				860.38	57.65
57	M							752.95	737.45	15.5	737.45	723.55	13.9	834.68				766.58	68.1
58	M							807.92	799.94	7.98	799.94	792.21	7.73	846.78				797.93	48.85
59	M							789.64	774.01	15.63	774.01	760.3	13.71	901.33				831	70.33
60	M							778.96	768.45	10.51	768.45	759.24	9.21	841.26				788.48	52.78
Male Average Daily Consumption				14.98		Female Average Daily Consumption					10.69								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	10/1/2012	10/2/2012			10/3/2012			10/4/2012			10/5/2012			10/6/2012	10/7/2012	10/8/2012	10/9/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
61	H				857.99	846.37	11.62	846.37	830.39	15.98	830.39	817.33	13.06	864.88				795.02	69.86
62	H				851.59	843.98	7.61	844	834.58	9.42	834.58	826.35	8.23	879.78				827.3	52.48
63	H				866.68	852.84	13.84	852.88	838.29	14.59	838.29	824.32	13.97	874.39				804.22	70.17
64	H				889.91	881.04	8.87	880.91	870.46	10.45	870.46	861.78	8.68	884.77				831.92	52.85
65	H				896.13	883.36	12.77	883.36	870.11	13.25	870.11	857.06	13.05	918.23				849.59	68.64
66	H				795.25	786.4	8.85	786.36	776.52	9.84	776.52	767.45	9.07	850.44				799.27	51.17
67	H				836.46	824.89	11.57	824.95	809.93	15.02	809.93	796.57	13.36	858.18				787.26	70.92
68	H				769.74	762.24	7.5	843.52	833.65	9.87	833.65	818.76	14.89	818.76				773.28	45.48
69	H				842.39	828.96	13.43	828.96	811.52	17.44	811.52	797.26	14.26	862.14				790.45	71.69
70	H				824.86	816.52	8.34	849.59	839.64	9.95	839.64	830.27	9.37	892.22				837.96	54.26
71	H							781.53	768.18	13.35	768.18	753.9	14.28	902.58				834.27	68.31
72	H							774.32	764.26	10.06	764.26	754.22	10.04	813.83				759.27	54.56
73	H							836.77	823.91	12.86	823.91	810.37	13.54	853.11				787.85	65.26
74	H							831.68	820.25	11.43	820.25	811.01	9.24	854.56				803.82	50.74
75	H							861.22	848.87	12.35	848.87	835.58	13.29	935.14				872.6	62.54
144	H							816.04	806.76	9.28	806.76	797.66	9.1	858.21				811.33	46.88
77	H							821.93	810.13	11.8	810.13	796.12	14.01	846.02				784.08	61.94
78	H							849.18	839.6	9.58	839.6	830.79	8.81	878.97				826.42	52.55
79	H							825.98	810.28	15.7	810.28	795.92	14.36	873.98				805.62	68.36
80	H							754.18	745.24	8.94	745.24	736.24	9	848.15				796.25	51.9
Male Average Daily Consumption				14.63		Female Average Daily Consumption					10.25								

Food Consumption: Week 2

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/8/2012	10/9/2012			10/10/2012			10/11/2012			10/12/2012			10/13/2012	10/14/2012	10/15/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	HOLIDAY			784.74	769.84	14.9	769.84	755.36	14.48	755.36	742.21	13.15	944.52			904.9	39.62
2	C				841.03	828.86	12.17	828.86	818.48	10.38	818.48	808.32	10.16	888.43			861.2	27.23
3	C				826.58	813.89	12.69	813.89	802.2	11.69	802.2	788.91	13.29	866.93			831.77	35.16
4	C				820.75	810.25	10.5	810.25	800.14	10.11	800.14	792.04	8.1	882.41			856.07	26.34
5	C				820.31	806.25	14.06	806.25	794.55	11.7	794.55	781.74	12.81	884.72			848.87	35.85
6	C				812.94	801.38	11.56	801.38	793.05	8.33	793.05	783.92	9.13	882.82			856.43	26.39
7	C				816.14	801.04	15.1	801.04	786.48	14.56	786.48	772.4	14.08	837.9			801.51	36.39
8	C				865.23	853.65	11.58	853.65	843.01	10.64	843.01	834.21	8.8	940.75			913.3	27.45
141	C				839.42	826	13.42	826	812.51	13.49	812.51	797.1	15.41	885.45			846.62	38.83
10	C				845.01	835.03	9.98	835.03	824.5	10.53	824.5	815.11	9.39	948.17			920.63	27.54
11	C				823.42	808.14	15.28	808.14	793.77	14.37	793.77	780.38	13.39	921.36			881.2	40.16
12	C				845.22	834.91	10.31	834.91	824.05	10.86	824.05	814.93	9.12	914.61			885.32	29.29
13	C				785.45	769.96	15.49	769.96	752.49	17.47	752.49	737.16	15.33	874.11			826.91	47.2
14	C				823.58	813.09	10.49	813.09	801.49	11.6	801.49	791.73	9.76	938.41			910.29	28.12
15	C				847.38	833.25	14.13	833.25	818.15	15.1	818.15	804	14.15	864.39			824.65	39.74
16	C				858.65	847.64	11.01	847.64	836.99	10.65	836.99	826.48	10.51	907.1			876.58	30.52
17	C				854.65	840.14	14.51	840.14	824.42	15.72	824.42	810.68	13.74	935.07			895.38	39.69
18	C				799.66	790.05	9.61	790.05	780.8	9.25	780.8	773.12	7.68	932.47			907.9	24.57
19	C				773.65	758.97	14.68	758.97	743.67	15.3	743.67	729.16	14.51	929.43			889.46	39.97
20	C				786.97	776.46	10.51	776.46	766.58	9.88	766.58	756.31	10.27	926.75			897.81	28.94
Male Average Daily Consumption				13.97		Female Average Daily Consumption					9.88							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/8/2012	10/9/2012			10/10/2012			10/11/2012			10/12/2012			10/13/2012	10/14/2012	10/15/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	HOLIDAY			829.17	815.19	13.98	815.19	804.19	11	804.19	790.71	13.48	898.59			864.11	34.48
22	L				839.53	830.04	9.49	830.04	821.4	8.64	821.4	812.14	9.26	872.59			846.82	25.77
23	L				804.65	791.34	13.31	791.34	776.92	14.42	776.92	765.5	11.42	875.4			837.45	37.95
24	L				846.38	836.5	9.88	836.5	828.54	7.96	828.54	819.12	9.42	853.44			832.15	21.29
25	L				799.88	785.1	14.78	785.1	771.85	13.25	771.85	759.38	12.47	855.89			819.31	36.58
26	L				822.72	813.88	8.84	813.88	803.18	10.7	803.18	796.23	6.95	848.3			825.54	22.76
27	L				786.77	772.43	14.34	772.43	757.44	14.99	757.44	744.22	13.22	825.1			785.48	39.62
28	L				834.92	823.9	11.02	823.9	814.47	9.43	814.47	805.23	9.24	833.77			809.1	24.67
29	L				794.05	778.02	16.03	778.02	764.43	13.59	764.43	751.54	12.89	822.52			786.09	36.43
30	L				806.47	795.76	10.71	795.76	786.32	9.44	786.32	778.29	8.03	846.26			818.25	28.01
31	L				793.98	779.57	14.41	779.57	764.58	14.99	764.58	753.66	10.92	789.18			753.4	35.78
32	L				817.13	808.04	9.09	808.04	797.24	10.8	797.24	789.5	7.74	843.08			817.72	25.36
33	L				831.34	817.4	13.94	817.4	802.23	15.17	802.23	789.34	12.89	789.34			816.29	-26.95
34	L				809.4	800.04	9.36	800.04	790.06	9.98	790.06	781.46	8.6	856.69			831.65	25.04
35	L				786.86	770.45	16.41	770.45	758.7	11.75	758.7	747.02	11.68	788.05			753.54	34.51
36	L				807.57	797.86	9.71	797.86	788.14	9.72	788.14	778.77	9.37	851.51			825.66	25.85
37	L				874.27	862.4	11.87	862.4	850.46	11.94	850.46	838.87	11.59	863.94			830.4	33.54
38	L				833.64	825.52	8.12	825.52	812.13	13.39	812.13	803.54	8.59	926.37			899.47	26.9
39	L				819.19	805.21	13.98	805.21	792.47	12.74	792.47	779.22	13.25	854.8			817.79	37.01
40	L				825.5	816.87	8.63	816.87	809.27	7.6	809.27	801.21	8.06	827.09			805.29	21.8
Male Average Daily Consumption				13.06		Female Average Daily Consumption					9.01				#33: excluded negative from average			

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/8/2012	10/9/2012			10/10/2012			10/11/2012			10/12/2012			10/13/2012	10/14/2012	10/15/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	HOLIDAY			828.13	814.23	13.9	814.23	802.07	12.16	802.07	791.04	11.03	836.59			803.9	32.69
42	M				859.41	851.53	7.88	851.53	840.75	10.78	840.75	832.23	8.52	874.43			848.38	26.05
143	M				829.47	815.76	13.71	815.76	801.48	14.28	801.48	789.06	12.42	843.97			809.76	34.21
44	M				811.18	799.8	11.38	799.8	789.66	10.14	789.66	780.82	8.84	817.65			791.93	25.72
45	M				870.29	855.88	14.41	855.88	840.41	15.47	840.41	826.72	13.69	867.57			830.73	36.84
46	M				857.16	844.32	12.84	844.32	836.5	7.82	836.5	828.01	8.49	886.77			863.27	23.5
47	M				755.87	741.63	14.24	741.63	728.95	12.68	728.95	716.48	12.47	800.33			765.82	34.51
48	M				820.46	811.13	9.33	811.13	801.05	10.08	801.05	791.95	9.1	813.44			789.28	24.16
49	M				870.4	856.25	14.15	856.25	842.45	13.8	842.45	829.04	13.41	874.76			838.51	36.25
50	M				855.14	844.59	10.55	844.59	834.77	9.82	834.77	823.98	10.79	900.95			874.07	26.88
51	M				773.17	758.7	14.47	758.7	744.02	14.68	744.02	730.6	13.42	833.57			790.05	43.52
52	M				846.05	834.75	11.3	834.75	824.93	9.82	824.93	815.58	9.35	837.49			810.04	27.45
53	M				883.17	868.33	14.84	868.33	854.49	13.84	854.49	843.26	11.23	884.43			850.54	33.89
54	M				841.19	831.19	10	831.19	819.53	11.66	819.53	810.17	9.36	868.35			839.59	28.76
55	M				775.9	762.87	13.03	762.87	749.91	12.96	749.91	736.77	13.14	794.81			757.67	37.14
56	M				876.16	865.46	10.7	865.46	855.73	9.73	855.73	846.41	9.32	853.37			828.03	25.34
57	M				765.49	752.86	12.63	752.86	738.08	14.78	738.08	724.22	13.86	793.38			757.79	35.59
58	M				790.63	781.4	9.23	781.4	770.19	11.21	770.19	763.33	6.86	884.84			859.36	25.48
59	M				802.32	789.1	13.22	789.1	776.04	13.06	776.04	763.58	12.46	854.7			823.39	31.31
60	M				777.63	769.14	8.49	769.14	758.68	10.46	758.68	748.01	10.67	808.03			781.76	26.27
Male Average Daily Consumption				13.05		Female Average Daily Consumption					9.53							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/8/2012	10/9/2012			10/10/2012			10/11/2012			10/12/2012			10/13/2012	10/14/2012	10/15/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	HOLIDAY			806.09	793.37	12.72	793.37	779.91	13.46	779.91	766.92	12.99	817.86			781.51	36.35
62	H				818.85	810.4	8.45	810.4	800.51	9.89	800.51	792.62	7.89	826.5			803.18	23.32
63	H				813.35	800.82	12.53	800.82	787.83	12.99	787.83	775.55	12.28	859.71			823.15	36.56
64	H				794.23	785.87	8.36	785.87	776.34	9.53	776.34	767.41	8.93	805.38			781.7	23.68
65	H				838.83	826.5	12.33	826.5	811.88	14.62	811.88	802.14	9.74	860.51			823.7	36.81
66	H				810.42	802.55	7.87	802.55	793.92	8.63	793.92	784.11	9.81	843.54			820.58	22.96
67	H				779.81	766.43	13.38	766.43	752.98	13.45	752.98	740.12	12.86	804.77			766.16	38.61
68	H				777.25	767.49	9.76	767.49	758.2	9.29	758.2	750.2	8	789.66			769.37	20.29
69	H				778.59	765.82	12.77	765.82	752.8	13.02	752.8	739.44	13.36	800.61			764.74	35.87
70	H				816.94	806.02	10.92	806.02	796	10.02	796	788	8	866.02			845	21.02
71	H				795.28	779.41	15.87	779.41	766.67	12.74	766.67	753.71	12.96	825.6			787.12	38.48
72	H				760.02	750.33	9.69	750.33	741.27	9.06	741.27	732.92	8.35	800.74			774.04	26.7
73	H				786.88	774.91	11.97	774.91	763.98	10.93	763.98	752.55	11.43	803.35			770.69	32.66
74	H				798.68	789.63	9.05	789.63	780.11	9.52	780.11	771.59	8.52	877.92			851	26.92
75	H				832.55	815.89	16.66	815.89	804.35	11.54	804.35	793.63	10.72	844.86			813.94	30.92
144	H				801.87	794.05	7.82	794.05	784.68	9.37	784.68	775.81	8.87	801.86			778.9	22.96
77	H				819.86	807.28	12.58	807.28	794.9	12.38	794.9	784.08	10.82	847.77			810.65	37.12
78	H				840.38	830.96	9.42	830.96	821.2	9.76	821.2	812.07	9.13	921.33			897.85	23.48
79	H				734.44	720.77	13.67	720.77	708.34	12.43	708.34	694.93	13.41	755.37			717.05	38.32
80	H				796.87	786.27	10.6	786.27	776.9	9.37	776.9	769.34	7.56	879.57			852.08	27.49
Male Average Daily Consumption				12.58		Female Average Daily Consumption					8.78							

Food Consumption: Week 3

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/15/2012	10/16/2012			10/17/2012		10/18/2012			10/19/2012			10/20/2012	10/21/2012	10/22/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	904.9	888.32	16.58	888.32	874.71	13.61	860.19	14.52	860.19	846.33	13.86	957.46			916.44	41.02
2	C	861.2	849.69	11.51	849.69	839.46	10.23	829.54	9.92	829.54	817.23	12.31	871.3			839.17	32.13
3	C	831.77	817.58	14.19	817.58	804.14	13.44	793.34	10.8	793.34	776.88	16.46	962.55			919.71	42.84
4	C	856.07	846.76	9.31	846.76	837.31	9.45	828.28	9.03	828.28	818.37	9.91	887.22			858.33	28.89
5	C	848.87	833.62	15.25	833.62	819.35	14.27	804.51	14.84	804.51	789.85	14.66	919.4			877.65	41.75
6	C	856.43	845.49	10.94	845.49	835.57	9.92	826.03	9.54	826.03	813.35	12.68	864.01			833.63	30.38
7	C	801.51	787.14	14.37	787.14	773.64	13.5	759.37	14.27	759.37	745.99	13.38	906.86			863.26	43.6
8	C	913.3	900.83	12.47	900.83	889.86	10.97	880.62	9.24	880.62	868.81	11.81	919.23			888.7	30.53
141	C	846.62	831.87	14.75	831.87	816.77	15.1	803.49	13.28	803.49	786.08	17.41	910.07			866.7	43.37
10	C	920.63	908.92	11.71	908.92	898.92	10	888.79	10.13	888.79	876.22	12.57	910			880.01	29.99
11	C	881.2	865.29	15.91	865.29	848.84	16.45	836.05	12.79	836.05	820.82	15.23	957.03			914.5	42.53
12	C	885.32	874.48	10.84	874.48	863.6	10.88	852.92	10.68	852.92	840.55	12.37	875.61			844.56	31.05
13	C	826.91	810.85	16.06	810.85	793.84	17.01	777.58	16.26	777.58	760.26	17.32	910.53			862.83	47.7
14	C	910.29	898.94	11.35	898.94	887.71	11.23	877.51	10.2	877.51	866.93	10.58	903.66			872.02	31.64
15	C	824.65	806.63	18.02	806.63	793.05	13.58	777.61	15.44	777.61	761.89	15.72	922.01			877.41	44.6
16	C	876.58	864.08	12.5	864.08	851.95	12.13	841.42	10.53	841.42	829.65	11.77	901.68			868.81	32.87
17	C	895.38	880.23	15.15	880.23	864.7	15.53	850.51	14.19	850.51	835.6	14.91	890.85			846.72	44.13
18	C	907.9	896.95	10.95	896.95	888.44	8.51	880.96	7.48	880.96	871.43	9.53	911.92			884.12	27.8
19	C	889.46	873.84	15.62	873.84	857.21	16.63	843.35	13.86	843.35	826.96	16.39	912.42			869.84	42.58
20	C	897.81	886.05	11.76	886.05	875.97	10.08	866.63	9.34	866.63	853.55	13.08	951.35			922.92	28.43
Male Average Daily Consumption				14.91			Female Average Daily Consumption			10.61							

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/15/2012	10/16/2012			10/17/2012		10/18/2012			10/19/2012			10/20/2012	10/21/2012	10/22/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	864.11	849.11	15	849.11	836.17	12.94	823.84	12.33	823.84	810.51	13.33	864.26			828.49	35.77
22	L	846.82	835.85	10.97	835.85	824.88	10.97	815.28	9.6	815.28	804.27	11.01	889.66			858.82	30.84
23	L	837.45	823.26	14.19	823.26	811.21	12.05	796.68	14.53	796.68	782.65	14.03	881.23			839.59	41.64
24	L	832.15	823.2	8.95	823.2	813.2	10	805.78	7.42	805.78	794.21	11.57	882.76			853.56	29.2
25	L	819.31	804.55	14.76	804.55	790.37	14.18	775.85	14.52	775.85	760.29	15.56	853.67			810.39	43.28
26	L	825.54	814.66	10.88	814.66	805.15	9.51	796.2	8.95	796.2	786	10.2	954.98			923.69	31.29
27	L	785.48	771.26	14.22	771.26	755.77	15.49	741.32	14.45	741.32	726.33	14.99	813.28			770.31	42.97
28	L	809.1	798.03	11.07	798.03	787.39	10.64	777.26	10.13	777.26	765.34	11.92	892.3			862.33	29.97
29	L	786.09	770.96	15.13	770.96	755.22	15.74	740.83	14.39	740.83	726.37	14.46	876.95			831.08	45.87
30	L	818.25	808.24	10.01	808.24	796.67	11.57	786.87	9.8	786.87	775.35	11.52	884.38			853.38	31
31	L	753.4	738.57	14.83	738.57	725.23	13.34	712.83	12.4	712.83	697.79	15.04	786.1			746.58	39.52
32	L	817.72	808.34	9.38	808.34	797.48	10.86	786.88	10.6	786.88	776.77	10.11	912.26			881.09	31.17
33	L	816.29	802.1	14.19	802.1	787.69	14.41	773.18	14.51	773.18	757.62	15.56	843.99			805.11	38.88
34	L	831.65	821.2	10.45	821.2	812.41	8.79	803.42	8.99	803.42	791.05	12.37	931.83			902.18	29.65
35	L	753.54	737.37	16.17	737.37	723.18	14.19	711.46	11.72	711.46	695.82	15.64	795.35			752.73	42.62
36	L	825.66	815.23	10.43	815.23	803.54	11.69	793.19	10.35	793.19	784.54	8.65	902.79			871.38	31.41
37	L	830.4	817.74	12.66	817.74	803.52	14.22	792.89	10.63	792.89	779.21	13.68	862.45			824.71	37.74
38	L	899.47	887.29	12.18	887.29	875.59	11.7	866.18	9.41	866.18	N/A	N/A	997.77			964.68	33.09
39	L	817.79	802.51	15.28	802.51	786.98	15.53	774.91	12.07	774.91	760.24	14.67	852.82			809.7	43.12
40	L	805.29	796.03	9.26	796.03	786.5	9.53	779.52	6.98	779.52	769.92	9.6	915.97			889.83	26.14
Male Average Daily Consumption				14.08			Female Average Daily Consumption			10.19							

#38: Food added before being weighed 'out', not included in average

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/15/2012	10/16/2012			10/17/2012		10/18/2012			10/19/2012			10/20/2012	10/21/2012	10/22/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	803.9	789.75	14.15	789.75	775.95	13.8	762.52	13.43	762.52	745.39	17.13	827.27			787.79	39.48
42	M	848.38	835.88	12.5	835.88	824.48	11.4	814.6	9.88	814.6	801.72	12.88	942.91			907.99	34.92
143	M	809.76	795.93	13.83	795.93	779.66	16.27	765.43	14.23	765.43	749.89	15.54	859.73			818.45	41.28
44	M	791.93	780.69	11.24	780.69	771.74	8.95	761.25	10.49	761.25	748.75	12.5	889.14			855.67	33.47
45	M	830.73	814.51	16.22	814.51	797.93	16.58	784.25	13.68	784.25	767.35	16.9	855.36			810.3	45.06
46	M	863.27	854.53	8.74	854.53	842.56	11.97	833.52	9.04	833.52	823.21	10.31	930.76			903.05	27.71
47	M	765.82	752.74	13.08	752.74	749.72	3.02	727.49	22.23	817.35	800.22	17.13	880.38			836.1	44.28
48	M	789.28	779.36	9.92	779.36	769.06	10.3	758.91	10.15	758.91	748.84	10.07	892.16			863.06	29.1
49	M	838.51	824.94	13.57	824.94	809.06	15.88	795.52	13.54	795.52	778.68	16.84	827.91			786.53	41.38
50	M	874.07	864.17	9.9	864.17	852.12	12.05	842.96	9.16	842.96	830.79	12.17	952.71			922.21	30.5
51	M	790.05	774.17	15.88	774.17	757.08	17.09	742.24	14.84	742.24	726.1	16.14	836.1			789.54	46.56
52	M	810.04	799.1	10.94	799.1	shredded	shredded	893.46	12.2	893.46	880.2	13.26	935.06			898.51	36.55
53	M	850.54	837.18	13.36	837.18	824.66	12.52	811.76	12.9	811.76	797.19	14.57	848.94			810.82	38.12
54	M	839.59	828.02	11.57	828.02	817.8	10.22	807.48	10.32	807.48	796.05	11.43	964			931.2	32.8
55	M	757.67	743.93	13.74	743.93	729.28	14.65	715.34	13.94	715.34	700.52	14.82	817.49			773.83	43.66
56	M	828.03	818.82	9.21	818.82	807.89	10.93	797.61	10.28	797.61	785.84	11.77	864.69			836.08	28.61
57	M	757.79	743.94	13.85	743.94	729.53	14.41	715.12	14.41	715.12	702.04	13.08	828.36			789.42	38.94
58	M	859.36	848.28	11.08	848.28	837.61	10.67	827.33	10.28	827.33	N/A	N/A	874.91			846.62	28.29
59	M	823.39	805.72	17.67	805.72	788.13	17.59	774.38	13.75	774.38	758.74	15.64	841.51			796.98	44.53
60	M	781.76	770.42	11.34	770.42	761.02	9.4	750.27	10.75	750.27	738.17	12.1	899.03			865.98	33.05
Male Average Daily Consumption				14.66			Female Average Daily Consumption			10.76							

#47: Wet food, not included in average

#58: Food added before being weighed 'out', not included in average

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/15/2012	10/16/2012			10/17/2012		10/18/2012			10/19/2012			10/20/2012	10/21/2012	10/22/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	781.51	767.39	14.12	767.39	752.06	15.33	739.63	12.43	739.63	724.65	14.98	876.85			834.43	42.42
62	H	803.18	792.95	10.23	792.95	782.63	10.32	772.7	9.93	772.7	762.48	10.22	893.43			860.37	33.06
63	H	823.15	810.67	12.48	810.67	797.59	13.08	784.09	13.5	784.09	770.45	13.64	860.86			820.3	40.56
64	H	781.7	771.4	10.3	771.4	761.93	9.47	753.22	8.71	753.22	744.02	9.2	920.4			886.65	33.75
65	H	823.7	808.7	15	808.7	793.91	14.79	777.52	16.39	777.52	763.15	14.37	834.38			793.02	41.36
66	H	820.58	808.93	11.65	808.93	796.65	12.28	785.83	10.82	785.83	774.46	11.37	917.42			884.36	33.06
67	H	766.16	750.73	15.43	750.73	736.17	14.56	723.01	13.16	723.01	706.73	16.28	786.72			744.85	41.87
68	H	769.37	757.7	11.67	757.7	748.93	8.77	738.41	10.52	738.41	728.77	9.64	919.78			888.66	31.12
69	H	764.74	749.41	15.33	749.41	733.4	16.01	718.66	14.74	718.66	703.08	15.58	912.1			865.45	46.65
70	H	845	832.61	12.39	832.61	822.96	9.65	812.73	10.23	812.73	801	11.73	854.38			827.58	26.8
71	H	787.12	772.16	14.96	772.16	756.86	15.3	742.29	14.57	742.29	726.35	15.94	961.37			914.97	46.4
72	H	774.04	762.7	11.34	762.7	752.89	9.81	742.33	10.56	742.33	731.21	11.12	807.03			775.57	31.46
73	H	770.69	759.29	11.4	759.29	745.95	13.34	733.26	12.69	733.26	719.64	13.62	927.78			886.58	41.2
74	H	851	841.41	9.59	841.41	830.55	10.86	820.59	9.96	820.59	809.96	10.63	876.29			846.23	30.06
75	H	813.94	800.32	13.62	800.32	785.54	14.78	773.07	12.47	773.07	760.73	12.34	849.14			812.6	36.54
144	H	778.9	767.61	11.29	767.61	756.74	10.87	747.48	9.26	747.48	738.28	9.2	864.11			833.93	30.18
77	H	810.65	797.72	12.93	797.72	784.45	13.27	771.17	13.28	771.17	757.19	13.98	969.52			924.3	45.22
78	H	897.85	887.42	10.43	887.42	875.87	11.55	864.6	11.27	864.6	855.34	9.26	944.9			913.41	31.49
79	H	717.05	700.85	16.2	839.47	821.41	18.06	803.6	17.81	803.6	789	14.6	875.58			831	44.58
80	H	852.08	842.17	9.91	842.17	831.09	11.08	821.02	10.07	821.02	810.62	10.4	881.06			849.1	31.96
Male Average Daily Consumption				14.37			Female Average Daily Consumption			10.44							

Food Consumption: Week 4

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/22/2012	10/23/2012			10/24/2012		10/25/2012			10/26/2012			10/27/2012	10/28/2012	10/29/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	916.44	904.56	11.88	904.56	892.38	12.18	880.06	12.32	880.06	867.16	12.9	970.55			923.57	46.98
2	C	839.17	829.46	9.71	829.46	822.3	7.16	814.07	8.23	814.07	804.04	10.03	912.36			877.47	34.89
3	C	919.71	906.48	13.23	906.48	895.04	11.44	880.99	14.05	880.99	868.05	12.94	940.99			893.65	47.34
4	C	858.33	848.51	9.82	848.51	842.5	6.01	832.32	10.18	832.32	825.01	7.31	974.75			945.2	29.55
5	C	877.65	864.29	13.36	864.29	853.6	10.69	840.76	12.84	840.76	826.47	14.29	891.2			847.34	43.86
6	C	833.63	824.17	9.46	824.17	816.13	8.04	807.23	8.9	807.23	799.34	7.89	925.82			889.35	36.47
7	C	863.26	851.37	11.89	851.37	840.31	11.06	828.58	11.73	828.58	815.24	13.34	922.27			874.31	47.96
8	C	888.7	879.05	9.65	879.05	871.31	7.74	861.13	10.18	861.13	851.61	9.52	981.83			943.81	38.02
141	C	866.7	853.25	13.45	853.25	841.45	11.8	828.27	13.18	828.27	815.06	13.21	899.29			848.64	50.65
10	C	880.01	871.84	8.17	871.84	863.81	8.03	855.23	8.58	855.23	846.24	8.99	931.73			894.15	37.58
11	C	914.5	900.43	14.07	900.43	887.65	12.78	873.48	14.17	873.48	857.89	15.59	942.71			895.65	47.06
12	C	844.56	834.91	9.65	834.91	827.14	7.77	816.64	10.5	816.64	N/A	N/A	968.17			930.78	37.39
13	C	862.83	846.59	16.24	846.59	834.44	12.15	818.79	15.65	818.79	803.91	14.88	875.6			815.57	60.03
14	C	872.02	861.97	10.05	861.97	852.81	9.16	839.19	13.62	839.19	834.41	4.78	905.16			865.12	40.04
15	C	877.41	862.47	14.94	862.47	850.66	11.81	836.14	14.52	836.14	820.26	15.88	935.53			879.46	56.07
16	C	868.81	857.71	11.1	857.71	849.63	8.08	841.01	8.62	841.01	831.42	9.59	950.51			910.61	39.9
17	C	846.72	833.01	13.71	833.01	820.14	12.87	804.89	15.25	804.89	793.05	11.84	874.21			821.33	52.88
18	C	884.12	875.16	8.96	875.16	866.77	8.39	859.77	7	859.77	850.14	9.63	905.61			871.14	34.47
19	C	869.84	855.52	14.32	855.52	842.16	13.36	830.01	12.15	830.01	814.92	15.09	923.45			871	52.45
20	C	922.92	914.49	8.43	914.49	906.1	8.39	899.32	6.78	899.32	889.52	9.8	959.26			921.06	38.2
Male Average Daily Consumption				14.03			Female Average Daily Consumption			9.51							

#12: Food added before being weighed 'out', not included in average

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/22/2012	10/23/2012			10/24/2012		10/25/2012			10/26/2012			10/27/2012	10/28/2012	10/29/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	828.49	816.67	11.82	816.67	805.64	11.03	793.42	12.22	793.42	782.21	11.21	952.77			912.75	40.02
22	L	858.82	850.75	8.07	850.75	842.15	8.6	832.79	9.36	832.79	824.19	8.6	929.84			896.41	33.43
23	L	839.59	826.79	12.8	826.79	812.6	14.19	797.82	14.78	797.82	784	13.82	947.44			901.95	45.49
24	L	853.56	844.4	9.16	844.4	835.71	8.69	825.54	10.17	825.54	817.48	8.06	973.11			939.87	33.24
25	L	810.39	797.36	13.03	797.36	784.85	12.51	770.89	13.96	770.89	758.29	12.6	921.07			873.05	48.02
26	L	923.69	914.64	9.05	914.64	907.74	6.9	900.17	7.57	900.17	892.65	7.52	935.48			904.4	31.08
27	L	770.31	757.41	12.9	757.41	742.75	14.66	728.78	13.97	728.78	714.43	14.35	990.54			943.74	46.8
28	L	862.33	852.26	10.07	852.26	842.89	9.37	834.63	8.26	834.63	825.4	9.23	948.8			912.77	36.03
29	L	831.08	817.91	13.17	817.91	805.09	12.82	789.92	15.17	789.92	775.46	14.46	927.23			877.34	49.89
30	L	853.38	844.61	8.77	844.61	834.36	10.25	824.16	10.2	824.16	815.18	8.98	1025.04			990.19	34.85
31	L	746.58	732.61	13.97	732.61	721.57	11.04	709.01	12.56	709.01	695.51	13.5	823.35			778.26	45.09
32	L	881.09	872.21	8.88	872.21	864.43	7.78	856.65	7.78	856.65	845.55	11.1	916.94			880.87	36.07
33	L	805.11	792	13.11	792	780	12	766.59	13.41	766.59	753.28	13.31	919.32			871.84	47.48
34	L	902.18	893.23	8.95	893.23	885.58	7.65	876.07	9.51	876.07	866.12	9.95	1011.75			976.89	34.86
35	L	752.73	737.5	15.23	737.5	726.82	10.68	712.52	14.3	712.52	697.59	14.93	827.37			779.46	47.91
36	L	871.38	863.15	8.23	863.15	853.05	10.1	843.92	9.13	843.92	835.02	8.9	1003.47			966.84	36.63
37	L	824.71	812.36	12.35	812.36	800.64	11.72	789.59	11.05	789.59	777.98	11.61	935.31			891.58	43.73
38	L	964.68	956.51	8.17	956.51	947.17	9.34	938.86	8.31	938.86	929.03	9.83	992.92			957.06	35.86
39	L	809.7	797.01	12.69	797.01	784.26	12.75	769.16	15.1	769.16	757.15	12.01	830.59			783.47	47.12
40	L	889.83	881.46	8.37	881.46	875.6	5.86	866.41	9.19	866.41	859.49	6.92	944.74			916.44	28.3
Male Average Daily Consumption				13.53			Female Average Daily Consumption			9.29							

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/22/2012	10/23/2012			10/24/2012		10/25/2012			10/26/2012			10/27/2012	10/28/2012	10/29/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	787.79	775.06	12.73	775.06	761.72	13.34	748.07	13.65	748.07	736.99	11.08	938.37			892.23	46.14
42	M	907.99	900.47	7.52	900.47	891.04	9.43	881.93	9.11	881.93	871.14	10.79	951.62			914.52	37.1
143	M	818.45	803.73	14.72	803.73	790.27	13.46	776.27	14	776.27	763.22	13.05	845.18			800.13	45.05
44	M	855.67	847.3	8.37	847.3	838.13	9.17	828.16	9.97	828.16	817.86	10.3	949.62			915.9	33.72
45	M	810.3	795.19	15.11	795.19	780.46	14.73	766.18	14.28	766.18	750.59	15.59	945.59			894.38	51.21
46	M	903.05	894.07	8.98	894.07	886.83	7.24	878.58	8.25	878.58	869.5	9.08	962.18			931.11	31.07
47	M	836.1	823.76	12.34	823.76	809.73	14.03	795.73	14	795.73	781.81	13.92	843.91			795.23	48.68
48	M	863.06	853.74	9.32	853.74	845.66	8.08	836.56	9.1	836.56	827.47	9.09	922.96			889.56	33.4
49	M	786.53	773.36	13.17	773.36	757.99	15.37	744.39	13.6	744.39	729.49	14.9	939.72			891.81	47.91
50	M	922.21	911.42	10.79	911.42	902.37	9.05	893.36	9.01	893.36	883.83	9.53	966.91			931.49	35.42
51	M	789.54	776.23	13.31	776.23	761.31	14.92	745.81	15.5	745.81	732.3	13.51	816.99			766	50.99
52	M	898.51	888.56	9.95	888.56	878.24	10.32	869.12	9.12	869.12	858.93	10.19	922.35			881.61	40.74
53	M	810.82	799.13	11.69	799.13	787.29	11.84	776.61	10.68	776.61	764.2	12.41	936.06			891.46	44.6
54	M	931.2	921.59	9.61	921.59	912.38	9.21	904.41	7.97	904.41	894.33	10.08	1007.39			973.27	34.12
55	M	773.83	760.81	13.02	760.81	745.52	15.29	732.7	12.82	732.7	718.98	13.72	916.42			864.6	51.82
56	M	836.08	828.23	7.85	828.23	818.78	9.45	810.61	8.17	810.61	800.86	9.75	870.95			836.02	34.93
57	M	789.42	775.01	14.41	775.01	761.46	13.55	750.16	11.3	750.16	736.46	13.7	911.57			863.31	48.26
58	M	846.62	837.93	8.69	837.93	828.96	8.97	821.6	7.36	821.6	810.97	10.63	1002.76			968.48	34.28
59	M	796.98	783.99	12.99	783.99	769.74	14.25	757.77	11.97	757.77	741.26	16.51	921.76			872.31	49.45
60	M	865.98	858.83	7.15	858.83	850.47	8.36	840.82	9.65	840.82	830.96	9.86	915.6			882.69	32.91
Male Average Daily Consumption				14.12			Female Average Daily Consumption			9.61							

	Day	Monday	Tuesday			Wednesday		Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/22/2012	10/23/2012			10/24/2012		10/25/2012			10/26/2012			10/27/2012	10/28/2012	10/29/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	834.43	821.86	12.57	821.86	807.39	14.47	793.72	13.67	793.72	779.35	14.37	924.92			876.3	48.62
62	H	860.37	851.88	8.49	851.88	843.14	8.74	835.79	7.35	835.79	825.4	10.39	976.69			940.76	35.93
63	H	820.3	806.85	13.45	806.85	794.99	11.86	783.24	11.75	783.24	770.92	12.32	904.26			856.35	47.91
64	H	886.65	878.96	7.69	878.96	870.15	8.81	861.53	8.62	861.53	852.82	8.71	900.7			869.75	30.95
65	H	793.02	779.02	14	779.02	767.7	11.32	754.32	13.38	754.32	740.27	14.05	915.04			866.75	48.29
66	H	884.36	875.7	8.66	875.7	866.04	9.66	856.92	9.12	856.92	848.52	8.4	951.84			916.21	35.63
67	H	744.85	729.53	15.32	729.53	717.57	11.96	702.98	14.59	702.98	689.8	13.18	932.63			882.71	49.92
68	H	888.66	880.39	8.27	880.39	872.71	7.68	864.94	7.77	864.94	854.32	10.62	916.95			885.89	31.06
69	H	865.45	850.02	15.43	850.02	834.66	15.36	820.66	14	820.66	806.44	14.22	918.15			870.4	47.75
70	H	827.58	817.72	9.86	817.72	808.41	9.31	800.52	7.89	800.52	792.44	8.08	992			957.78	34.22
71	H	914.97	900.73	14.24	900.73	888.53	12.2	874.28	14.25	874.28	860.41	13.87	928.95			874.76	54.19
72	H	775.57	763.81	11.76	763.81	756.1	7.71	746.42	9.68	746.42	737.07	9.35	849.99			815.72	34.27
73	H	886.58	874.67	11.91	874.67	860.38	14.29	849.42	10.96	849.42	835.97	13.45	902.52			856.06	46.46
74	H	846.23	837.83	8.4	837.83	828	9.83	819.8	8.2	819.8	811.07	8.73	957.27			920.42	36.85
75	H	812.6	799.24	13.36	799.24	787.79	11.45	776.09	11.7	776.09	763.11	12.98	916.44			873.71	42.73
144	H	833.93	824.48	9.45	824.48	814.75	9.73	806.07	8.68	806.07	797.19	8.88	856.35			822.06	34.29
77	H	924.3	911.62	12.68	911.62	897.96	13.66	886.23	11.73	886.23	870.39	15.84	936.67			889.32	47.35
78	H	913.41	904.46	8.95	904.46	895.14	9.32	886.31	8.83	886.31	877.02	9.29	1040.11			1001.95	38.16
79	H	831	816.87	14.13	816.87	804.23	12.64	791.44	12.79	791.44	777.23	14.21	904.34			855.12	49.22
80	H	849.1	839.77	9.33	839.77	832.27	7.5	823.68	8.59	823.68	816.16	7.52	872.61			835.89	36.72
Male Average Daily Consumption				13.89			Female Average Daily Consumption			9.40							

Food Consumption: Week 5

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/29/2012	10/30/2012			10/31/2012			11/1/2012			11/2/2012			11/3/2012	11/4/2012	11/5/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	923.57	906.77	16.8	906.77	893.61	13.16	893.61	880.31	13.3	880.31	865.43	14.88	931.95			893.62	38.33
2	C	877.47	864.64	12.83	864.64	855.19	9.45	855.19	847	8.19	847	835.65	11.35	902.09			872.23	29.86
3	C	893.65	878.23	15.42	878.23	865.27	12.96	865.27	852.04	13.23	852.04	836.37	15.67	881.26			844.46	36.8
4	C	945.2	933.22	11.98	933.22	926.29	6.93	926.29	917.69	8.6	917.69	907.52	10.17	935.82			910.9	24.92
5	C	847.34	830.08	17.26	830.08	818.21	11.87	818.21	803.17	15.04	803.17	789.89	13.28	875.15			835.41	39.74
6	C	889.35	876.49	12.86	876.49	867.88	8.61	867.88	859.45	8.43	859.45	847.11	12.34	928.5			898.88	29.62
7	C	874.31	858.01	16.3	858.01	846.04	11.97	846.04	830.72	15.32	830.72	814.86	15.86	896.49			856.86	39.63
8	C	943.81	929.57	14.24	929.57	920.49	9.08	920.49	910.21	10.28	910.21	897.06	13.15	934.44			901.42	33.02
141	C	848.64	832.63	16.01	832.63	820.15	12.48	820.15	806.76	13.39	806.76	789.69	17.07	846.24			804.11	42.13
10	C	894.15	883.6	10.55	883.6	875.18	8.42	875.18	867.17	8.01	867.17	856.67	10.5	915.85			888.03	27.82
11	C	895.65	877.21	18.44	877.21	862.83	14.38	862.83	847.63	15.2	847.63	830.77	16.86	943.68			901.8	41.88
12	C	930.78	918.68	12.1	918.68	911.84	6.84	911.84	902.08	9.76	902.08	890.67	11.41	967.59			938.08	29.51
13	C	815.57	796.13	19.44	796.13	779.56	16.57	779.56	761.73	17.83	761.73	743.21	18.52	789.94			743.88	46.06
14	C	865.12	852.45	12.67	852.45	844.19	8.26	844.19	832.8	11.39	832.8	822.32	10.48	883.14			853.48	29.66
15	C	879.46	863.13	16.33	863.13	848.81	14.32	848.81	835.53	13.28	835.53	817.56	17.97	908.94			863.5	45.44
16	C	910.61	897.96	12.65	897.96	887.7	10.26	887.7	876.95	10.75	876.95	862.92	14.03	968.52			936.9	31.62
17	C	821.33	805.21	16.12	805.21	789.53	15.68	789.53	774.87	14.66	774.87	756.86	18.01	913.39			867.78	45.61
18	C	871.14	861.71	9.43	861.71	856.63	5.08	856.63	850.89	5.74	850.89	841.57	9.32	880.7			862.1	18.6
19	C	871	853.25	17.75	853.25	840.01	13.24	840.01	826.3	13.71	826.3	811.36	14.94	885.84			841.97	43.87
20	C	921.06	909.22	11.84	909.22	902	7.22	902	892.78	9.22	892.78	881.59	11.19	935.69			907.42	28.27
Male Average Daily Consumption				15.09		Female Average Daily Consumption				10.00								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/29/2012	10/30/2012			10/31/2012			11/1/2012			11/2/2012			11/3/2012	11/4/2012	11/5/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	912.75	898.45	14.3	898.45	886.08	12.37	886.08	875.06	11.02	875.06	861.72	13.34	898.33			867.27	31.06
22	L	896.41	884.25	12.16	884.25	877.23	7.02	877.23	867.36	9.87	867.36	855.14	12.22	920.59			894.83	25.76
23	L	901.95	886.69	15.26	886.69	872.13	14.56	872.13	857.7	14.43	857.7	841.11	16.59	887.09			849.94	37.15
24	L	939.87	928.7	11.17	928.7	919.66	9.04	919.66	909.39	10.27	909.39	900.36	9.03	950.47			923.42	27.05
25	L	873.05	857.32	15.73	857.32	845.29	12.03	845.29	830.66	14.63	830.66	815.13	15.53	933.14			893.78	39.36
26	L	904.4	891.83	12.57	891.83	886.15	5.68	886.15	877.54	8.61	877.54	867.97	9.57	911.47			889.15	22.32
27	L	943.74	927.95	15.79	927.95	887.4	40.55	887.4	874.46	12.94	874.46	859.55	14.91	908.08			866.17	41.91
28	L	912.77	900.77	12	900.77	920.25	-19.48	920.25	910.21	10.04	910.21	899.6	10.61	934.16			904.92	29.24
29	L	877.34	860.94	16.4	860.94	846.93	14.01	846.93	832.18	14.75	832.18	N/A	N/A	864.88			823.1	41.78
30	L	990.19	977.84	12.35	977.84	969.12	8.72	969.12	959.09	10.03	959.09	948.19	10.9	992.81			963.48	29.33
31	L	778.26	763.48	14.78	763.48	752.27	11.21	752.27	738.53	13.74	738.53	722.21	16.32	859.84			820.31	39.53
32	L	880.87	870.2	10.67	870.2	862.63	7.57	862.63	853.9	8.73	853.9	842.1	11.8	925.41			898.83	26.58
33	L	871.84	854.18	17.66	854.18	842.31	11.87	842.31	828.93	13.38	828.93	811.67	17.26	980.62			940.02	40.6
34	L	976.89	965.62	11.27	965.62	958.34	7.28	958.34	950	8.34	950	939.25	10.75	942.79			915.01	27.78
35	L	779.46	762.9	16.56	762.9	747.71	15.19	747.71	735.53	12.18	735.53	720.43	15.1	939.68			896.91	42.77
36	L	966.84	956.38	10.46	956.38	948.97	7.41	948.97	938.68	10.29	938.68	926.37	12.31	940.66			911.13	29.53
37	L	891.58	876.96	14.62	876.96	866.04	10.92	866.04	854.1	11.94	854.1	839.48	14.62	937.47			902.26	35.21
38	L	957.06	943.79	13.27	943.79	935.28	8.51	935.28	924.24	11.04	924.24	912.85	11.39	951.85			922.5	29.35
39	L	783.47	768.21	15.26	768.21	754.99	13.22	754.99	742.99	12	742.99	729.52	13.47	814.38			776.23	38.15
40	L	916.44	905.33	11.11	905.33	898.9	6.43	898.9	891.93	6.97	891.93	882.34	9.59	919.26			896.71	22.55
Male Average Daily Consumption				13.94		Female Average Daily Consumption				9.73								

#29: Food added before being weighed 'out', not included in average

#27 and #28: Feeders were put into the wrong cages on Tuesday 10/30; Food Out on Wednesday 10/31 is not accurate; not included in average

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/29/2012	10/30/2012			10/31/2012			11/1/2012			11/2/2012			11/3/2012	11/4/2012	11/5/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	892.23	877.02	15.21	877.02	866.12	10.9	866.12	852.56	13.56	852.56	835.4	17.16	924.24			885.29	38.95
42	M	914.52	899.07	15.45	899.07	890.07	9	890.07	878.24	11.83	878.24	866.27	11.97	912.6			880.73	31.87
143	M	800.13	785.75	14.38	785.75	773.94	11.81	773.94	759.79	14.15	759.79	746.65	13.14	921.99			885.21	36.78
44	M	915.9	902.46	13.44	902.46	892.82	9.64	892.82	882.95	9.87	882.95	870.94	12.01	914.74			887.73	27.01
45	M	894.38	876.3	18.08	876.3	861.22	15.08	861.22	844.51	16.71	844.51	826.91	17.6	898.93			854.3	44.63
46	M	931.11	921.51	9.6	921.51	913.42	8.09	913.42	905.32	8.1	905.32	896.05	9.27	933.01			907.1	25.91
47	M	795.23	780.07	15.16	780.07	767.05	13.02	767.05	756.12	10.93	756.12	741.8	14.32	907.46			867.26	40.2
48	M	889.56	878.31	11.25	878.31	870.23	8.08	870.23	861.86	8.37	861.86	851.31	10.55	955.74			926.48	29.26
49	M	891.81	876.25	15.56	876.25	860.25	16	860.25	845.86	14.39	845.86	829.41	16.45	890.66			847.36	43.3
50	M	931.49	920.05	11.44	920.05	910.58	9.47	910.58	898.77	11.81	898.77	888.52	10.25	926.68			898	28.68
51	M	766	749.43	16.57	749.43	734.63	14.8	734.63	720.17	14.46	720.17	701.4	18.77	886.92			840.14	46.78
52	M	881.61	871.79	9.82	871.79	863.26	8.53	863.26	852.9	10.36	852.9	841.59	11.31	953.24			shredded	shredded
53	M	891.46	877.39	14.07	877.39	865.05	12.34	865.05	852.38	12.67	852.38	837.74	14.64	936.68			898.21	38.47
54	M	973.27	962.52	10.75	962.52	954.14	8.38	954.14	944.14	10	944.14	933.87	10.27	978.68			950.08	28.6
55	M	864.6	849.09	15.51	849.09	835.32	13.77	835.32	820.63	14.69	820.63	806.36	14.27	862.72			817.46	45.26
56	M	836.02	826.5	9.52	826.5	817.93	8.57	817.93	807.55	10.38	807.55	797.17	10.38	892.09			863.41	28.68
57	M	863.31	847.73	15.58	847.73	836.7	11.03	836.7	822.48	14.22	822.48	808.36	14.12	903.34			862.49	40.85
58	M	968.48	955.56	12.92	955.56	948.26	7.3	948.26	939.09	9.17	939.09	928.59	10.5	981.42			954.89	26.53
59	M	872.31	855.5	16.81	855.5	842.48	13.02	842.48	828.36	14.12	828.36	812.5	15.86	855.16			813.97	41.19
60	M	882.69	871.31	11.38	871.31	860.89	10.42	860.89	852.86	8.03	852.86	842.92	9.94	880.91			851.35	29.56
Male Average Daily Consumption				14.47		Female Average Daily Consumption				10.06								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	10/29/2012	10/30/2012			10/31/2012			11/1/2012			11/2/2012			11/3/2012	11/4/2012	11/5/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	876.3	859.92	16.38	859.92	847.86	12.06	847.86	833.3	14.56	833.3	818.71	14.59	916			874.69	41.31
62	H	940.76	929.11	11.65	929.11	920.77	8.34	920.77	912.32	8.45	912.32	900.53	11.79	929.1			899.18	29.92
63	H	856.35	840.53	15.82	840.53	828.3	12.23	828.3	815.08	13.22	815.08	799.31	15.77	948.11			906.78	41.33
64	H	869.75	858.44	11.31	858.44	850.42	8.02	850.42	840.45	9.97	840.45	830.8	9.65	877.66			848.98	28.68
65	H	866.75	850.26	16.49	850.26	836.67	13.59	836.67	821.36	15.31	821.36	805.15	16.21	844.37			801.86	42.51
66	H	916.21	904.64	11.57	904.64	896.09	8.55	896.09	885.18	10.91	885.18	874.31	10.87	903.62			876.63	26.99
67	H	882.71	864.56	18.15	864.56	851.64	12.92	851.64	837.2	14.44	837.2	821.44	15.76	909.58			869.74	39.84
68	H	885.89	874.96	10.93	874.96	867.27	7.69	867.27	857.59	9.68	857.59	849.03	8.56	956.27			929.94	26.33
69	H	870.4	854.08	16.32	854.08	840.24	13.84	840.24	825.88	14.36	825.88	809.86	16.02	877.32			834.04	43.28
70	H	957.78	945.98	11.8	945.98	937.29	8.69	937.29	928.7	8.59	928.7	918.91	9.79	918.91			892.6	26.31
71	H	874.76	859.74	15.02	859.74	846.17	13.57	846.17	832.19	13.98	832.19	816.58	15.61	889.49			846.6	42.89
72	H	815.72	802.59	13.13	802.59	794.06	8.53	794.06	784.15	9.91	784.15	772.01	12.14	895.65			867.46	28.19
73	H	856.06	841.87	14.19	841.87	825.67	16.2	825.67	811.84	13.83	811.84	797.89	13.95	935.72			896.84	38.88
74	H	920.42	911.16	9.26	911.16	902.37	8.79	902.37	893.16	9.21	893.16	882.58	10.58	917.41			891.41	26
75	H	873.71	859.45	14.26	859.45	848.02	11.43	848.02	835.04	12.98	835.04	820.56	14.48	895.02			855.37	39.65
144	H	822.06	810.75	11.31	810.75	800.77	9.98	800.77	789.5	11.27	789.5	776.81	12.69	879.33			854.47	24.86
77	H	889.32	872.17	17.15	872.17	860.62	11.55	860.62	847.88	12.74	847.88	830.55	17.33	969.04			929.84	39.2
78	H	1001.95	989.05	12.9	989.05	981.13	7.92	981.13	971.78	9.35	971.78	960.09	11.69	978.88			951.95	26.93
79	H	855.12	838.33	16.79	838.33	824.98	13.35	824.98	809.74	15.24	809.74	792.59	17.15	830.07			785.52	44.55
80	H	835.89	823.68	12.21	823.68	816.63	7.05	816.63	807.12	9.51	807.12	795.88	11.24	852.48			824.69	27.79
Male Average Daily Consumption				14.53		Female Average Daily Consumption				9.92								

Food Consumption: Week 6

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday		Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	11/5/2012	11/6/2012		11/7/2012			11/8/2012			11/9/2012			11/10/2012	11/11/2012	11/12/2012	11/13/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
1	C	893.62	879.44	14.18	879.44	863.98	15.46	863.98	849.67	14.31	849.67	836.44	13.23	872.15				815.91	56.24
2	C	872.23	862.56	9.67	862.56	849.97	12.59	849.97	839.01	10.96	839.01	830.02	8.99	922.54				879.52	43.02
3	C	844.46	831.6	12.86	831.6	816.58	15.02	816.58	802.99	13.59	802.99	789.1	13.89	917.22				864.11	53.11
4	C	910.9	900.94	9.96	900.94	889.91	11.03	889.91	879.09	10.82	879.09	868.38	10.71	955.25				917.42	37.83
5	C	835.41	820.43	14.98	820.43	806.34	14.09	806.34	790.92	15.42	790.92	774.58	16.34	932.04				876.51	55.53
6	C	898.88	888.72	10.16	888.72	875.53	13.19	875.53	864.89	10.64	864.89	855.29	9.6	929.03				887.08	41.95
7	C	856.86	840.17	16.69	840.17	825.14	15.03	825.14	811.01	14.13	811.01	797.13	13.88	816.28				754.75	61.53
8	C	901.42	889.73	11.69	889.73	876.13	13.6	876.13	865.31	10.82	865.31	854	11.31	940.53				894.48	46.05
141	C	804.11	787.8	16.31	787.8	770.87	16.93	770.87	755.22	15.65	755.22	739.74	15.48	849.55				784.88	64.67
10	C	888.03	877.85	10.18	877.85	864.75	13.1	864.75	852.11	12.64	852.11	842.06	10.05	856.84				812.94	43.9
11	C	901.8	886.57	15.23	886.57	868.14	18.43	868.14	850.76	17.38	850.76	835.35	15.41	954.19				888.18	66.01
12	C	938.08	928.31	9.77	928.31	915.02	13.29	915.02	905.19	9.83	905.19	895.07	10.12	920.33				878.13	42.2
13	C	743.88	727.52	16.36	727.52	707.13	20.39	707.13	689.7	17.43	689.7	670.81	18.89	919.93				851.95	67.98
14	C	853.48	841.58	11.9	841.58	829.25	12.33	829.25	817.44	11.81	817.44	806.08	11.36	853.83				811.22	42.61
15	C	863.5	847.2	16.3	847.2	831.05	16.15	831.05	812.16	18.89	812.16	795.73	16.43	916.72				847.77	68.95
16	C	936.9	923.96	12.94	923.96	908.98	14.98	908.98	895.64	13.34	895.64	884.52	11.12	899.82				856.4	43.42
17	C	867.78	851.63	16.15	851.63	832.01	19.62	832.01	814.31	17.7	814.31	800.02	14.29	924.92				861.91	63.01
18	C	862.1	851.01	11.09	851.01	840.25	10.76	840.25	827.7	12.55	827.7	820.13	7.57	862.15				822.83	39.32
19	C	841.97	826.02	15.95	826.02	808.51	17.51	808.51	789.4	19.11	789.4	772.22	17.18	929.41				861.81	67.6
20	C	907.42	896.3	11.12	896.3	884.79	11.51	884.79	872.99	11.8	872.99	862.94	10.05	955.81				911.8	44.01
Male Average Daily Consumption				16.06		Female Average Daily Consumption				11.14									

	Day	Monday	Tuesday		Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	11/5/2012	11/6/2012		11/7/2012			11/8/2012			11/9/2012			11/10/2012	11/11/2012	11/12/2012	11/13/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
21	L	867.27	856.55	10.72	856.55	842.13	14.42	842.13	830.23	11.9	830.23	818.33	11.9	923.56				870.23	53.33
22	L	894.83	885.03	9.8	885.03	872.21	12.82	872.21	861.1	11.11	861.1	852.36	8.74	940.22				900.16	40.06
23	L	849.94	835.79	14.15	835.79	817.89	17.9	817.89	801.61	16.28	801.61	787.94	13.67	893.6				833.82	59.78
24	L	923.42	913.51	9.91	913.51	900.29	13.22	900.29	889.72	10.57	889.72	879.76	9.96	891.77				854.15	37.62
25	L	893.78	878.91	14.87	878.91	861.8	17.11	861.8	846.5	15.3	846.5	830.02	16.48	923.63				866.12	57.51
26	L	889.15	879.68	9.47	879.68	867.56	12.12	867.56	856.6	10.96	856.6	847.26	9.34	915.05				875.3	39.75
27	L	866.17	851.46	14.71	851.46	832.89	18.57	832.89	818.13	14.76	818.13	802.63	15.5	940.44				876.93	63.51
28	L	904.92	895.71	9.21	895.71	881.62	14.09	881.62	870.44	11.18	870.44	859.19	11.25	901.83				859.7	42.13
29	L	823.1	815	8.1	815	791.72	23.28	791.72	773.12	18.6	773.12	757.54	15.58	862.31				798.1	64.21
30	L	963.48	953.08	10.4	953.08	937.8	15.28	937.8	926.14	11.66	926.14	915.08	11.06	936.07				894.26	41.81
31	L	820.31	804.54	15.77	804.54	788.15	16.39	788.15	774.28	13.87	774.28	760.26	14.02	882.12				818.79	63.33
32	L	898.83	889.5	9.33	889.5	876.92	12.58	876.92	866.91	10.01	866.91	855.7	11.21	919.04				877.39	41.65
33	L	940.02	925.53	14.49	925.53	907.78	17.75	907.78	889.84	17.94	889.84	877.07	12.77	874.98				813.4	61.58
34	L	915.01	905.43	9.58	905.43	893.31	12.12	893.31	883.07	10.24	883.07	873.23	9.84	956.54				919.12	37.42
35	L	896.91	883.33	13.58	883.33	865.72	17.61	865.72	850.33	15.39	850.33	836.76	13.57	911.97				851.01	60.96
36	L	911.13	899.84	11.29	899.84	883.98	15.86	883.98	871.57	12.41	871.57	860.71	10.86	910.72				870.22	40.5
37	L	902.26	889.7	12.56	889.7	872.44	17.26	872.44	859.56	12.88	859.56	847.13	12.43	869.39				814.29	55.1
38	L	922.5	910.8	11.7	910.8	896.35	14.45	896.35	883.91	12.44	883.91	875.44	8.47	944.72				902.39	42.33
39	L	776.23	761.55	14.68	761.55	746.38	15.17	746.38	732.88	13.5	732.88	718.5	14.38	921.82				858.1	63.72
40	L	896.71	888.53	8.18	888.53	876.05	12.48	876.05	867.05	9	867.05	859.37	7.68	915.56				877.13	38.43
Male Average Daily Consumption				15.11		Female Average Daily Consumption				10.85							#38: Wet feed/feeder, not used in average		

	Day	Monday	Tuesday		Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	11/5/2012	11/6/2012		11/7/2012			11/8/2012			11/9/2012			11/10/2012	11/11/2012	11/12/2012	11/13/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
41	M	885.29	870.88	14.41	870.88	853.34	17.54	853.34	839.69	13.65	839.69	824.62	15.07	906.68				851.07	55.61
42	M	880.73	867.54	13.19	867.54	853.64	13.9	853.64	842.61	11.03	842.61	832.27	10.34	923.87				878.03	45.84
143	M	885.21	870.54	14.67	870.54	853.17	17.37	853.17	840.33	12.84	840.33	827.65	12.68	898.26				835.58	62.68
44	M	887.73	878.77	8.96	878.77	866.31	12.46	866.31	855.52	10.79	855.52	846.2	9.32	904.11				861.04	43.07
45	M	854.3	839.6	14.7	839.6	821.81	17.79	821.81	804.14	17.67	804.14	786.24	17.9	885.37				817.42	67.95
46	M	907.1	898.93	8.17	898.93	885.68	13.25	885.68	876.2	9.48	876.2	866.59	9.61	941.4				901.59	39.81
47	M	867.26	851.6	15.66	851.6	834.58	17.02	834.58	819.41	15.17	819.41	804.86	14.55	858.83				802.35	56.48
48	M	926.48	917.56	8.92	917.56	903.45	14.11	903.45	893.77	9.68	893.77	883.93	9.84	917.64				877.6	40.04
49	M	847.36	833.42	13.94	833.42	814.33	19.09	814.33	798.61	15.72	798.61	784.37	14.24	813.56				751.51	62.05
50	M	898	887.94	10.06	887.94	874.71	13.23	874.71	861.95	12.76	861.95	852.66	9.29	974.46				930.21	44.25
51	M	840.14	826.05	14.09	826.05	805.58	20.47	805.58	787.49	18.09	787.49	770.79	16.7	884.79				815.79	69
52	M	903.27	893.28	9.99	893.28	879.64	13.64	879.64	866.9	12.74	866.9	858.63	8.27	901.11				849.37	51.74
53	M	898.21	884.05	14.16	884.05	866.75	17.3	866.75	850.79	15.96	850.79	835.7	15.09	965.03				900.73	64.3
54	M	950.08	938.48	11.6	938.48	925.93	12.55	925.93	915.97	9.96	915.97	905.87	10.1	987.6				942.07	45.53
55	M	817.46	802.72	14.74	802.72	784.45	18.27	784.45	768.24	16.21	768.24	753.09	15.15	855.12				785.87	69.25
56	M	863.41	854.5	8.91	854.5	842.64	11.86	842.64	830.69	11.95	830.69	821.05	9.64	888.33				844.9	43.43
57	M	862.49	848.23	14.26	848.23	831.82	16.41	831.82	816.31	15.51	816.31	802	14.31	940.63				876.88	63.75
58	M	954.89	944.36	10.53	944.36	931.85	12.51	931.85	921.2	10.65	921.2	910.33	10.87	911.19				871.22	39.97
59	M	813.97	799.16	14.81	799.16	779.52	19.64	779.52	763.77	15.75	763.77	746.86	16.91	935.08				866.34	68.74
60	M	851.35	843.37	7.98	843.37	829.58	13.79	829.58	817.99	11.59	817.99	809.03	8.96	870.47				826.59	43.88
Male Average Daily Consumption				16.02		Female Average Daily Consumption				10.92									

	Day	Monday	Tuesday		Wednesday			Thursday			Friday			Saturday	Sunday	Monday	Tuesday	
	Date	11/5/2012	11/6/2012		11/7/2012			11/8/2012			11/9/2012			11/10/2012	11/11/2012	11/12/2012	11/13/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend & Holiday			Food Out	Weekend Consumption
61	H	874.69	859.23	15.46	859.23	841.42	17.81	841.42	826.58	14.84	826.58	811.44	15.14	972.6				907.21	65.39
62	H	899.18	889.01	10.17	889.01	876.73	12.28	876.73	865.78	10.95	865.78	855.1	10.68	886.57				845.93	40.64
63	H	906.78	894.12	12.66	894.12	877.15	16.97	877.15	861.66	15.49	861.66	845.2	16.46	893.55				829.64	63.91
64	H	848.98	839.08	9.9	839.08	828.72	10.36	828.72	818.56	10.16	818.56	809.24	9.32	938.16				896.76	41.4
65	H	801.86	786.88	14.98	786.88	770.86	16.02	770.86	755	15.86	755	739.74	15.26	881.04				816.09	64.95
66	H	876.63	865.2	11.43	865.2	854.21	10.99	854.21	843.42	10.79	843.42	832.97	10.45	897.71				855.45	42.26
67	H	869.74	854.84	14.9	854.84	836.54	18.3	836.54	820.7	15.84	820.7	806.56	14.14	939.76				874.69	65.07
68	H	929.94	920.13	9.81	920.13	907.18	12.95	907.18	897.1	10.08	897.1	887.77	9.33	963.35				925.64	37.71
69	H	834.04	816.87	17.17	816.87	797.69	19.18	797.69	782.73	14.96	782.73	767.22	15.51	891.13				826.88	64.25
70	H	892.6	883.49	9.11	883.49	870.59	12.9	870.59	859.2	11.39	859.2	849.71	9.49	910.39				872.43	37.96
71	H	846.6	831.22	15.38	831.22	814.16	17.06	814.16	797.43	16.73	797.43	783.75	13.68	945.82				880.08	65.74
72	H	867.46	858.64	8.82	858.64	845.79	12.85	845.79	834.9	10.89	834.9	823.83	11.07	884.7				841.95	42.75
73	H	896.84	883.37	13.47	883.37	866.35	17.02	866.35	852.99	13.36	852.99	838.52	14.47	942.02				883.81	58.21
74	H	891.41	883.36	8.05	883.36	870.4	12.96	870.4	859.91	10.49	859.91	849.38	10.53	899.81				857.88	41.93
75	H	855.37	840.99	14.38	840.99	825.6	15.39	825.6	810.23	15.37	810.23	796.83	13.4	929.98				874.77	55.21
144	H	854.47	847.18	7.29	847.18	833.48	13.7	833.48	823.72	9.76	823.72	813.52	10.2	887.31				854.21	33.1
77	H	929.84	916.65	13.19	916.65	899.09	17.56	899.09	882.81	16.28	882.81	869.95	12.86	951.28				888.23	63.05
78	H	951.95	941.41	10.54	941.41	927.62	13.79	927.62	915.04	12.58	915.04	904.64	10.4	838.08				795.94	42.14
79	H	785.52	769.34	16.18	769.34	750.5	18.84	750.5	735.27	15.23	735.27	719.35	15.92	975.85				908.09	67.76
80	H	824.69	813.62	11.07	813.62	800.35	13.27	800.35	788.53	11.82	788.53	777.64	10.89	916.71				871.53	45.18
Male Average Daily Consumption				15.73		Female Average Daily Consumption				10.70									

Food Consumption: Week 7

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/12/2012	11/13/2012			11/14/2012			11/15/2012			11/16/2012			11/17/2012	11/18/2012	11/19/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	HOLIDAY			815.91	800.6	15.31	800.6	787.16	13.44	787.16	772.22	14.94	866.89			824.52	42.37
2	C				879.52	868.8	10.72	868.8	859.09	9.71	859.09	848.22	10.87	885.71			856.28	29.43
3	C				864.11	848.84	15.27	848.84	836.19	12.65	836.19	823.49	12.7	883.82			842.83	40.99
4	C				917.42	907.49	9.93	907.49	897	10.49	897	887.93	9.07	887.97			861.53	26.44
5	C				876.51	861.12	15.39	861.12	846.21	14.91	846.21	834.41	11.8	885.42			843.77	41.65
6	C				887.08	878.46	8.62	878.46	865.48	12.98	865.48	856.03	9.45	929.71			897.65	32.06
7	C				754.75	739.86	14.89	739.86	726.86	13	726.86	711.49	15.37	858.85			813.45	45.4
8	C				894.48	880.47	14.01	880.47	868.45	12.02	868.45	858.47	9.98	887.78			854.17	33.61
141	C				784.88	770.38	14.5	770.38	753.6	16.78	753.6	737.89	15.71	854.27			804.83	49.44
10	C				812.94	802.14	10.8	802.14	789.8	12.34	789.8	780.7	9.1	882.06			850.31	31.75
11	C				888.18	872.09	16.09	872.09	857.89	14.2	857.89	845.22	12.67	952.81			904.05	48.76
12	C				878.13	868.46	9.67	868.46	859.49	8.97	859.49	849.92	9.57	890.59			859.89	30.7
13	C				851.95	833.96	17.99	833.96	816.9	17.06	816.9	802.56	14.34	879.57			827.45	52.12
14	C				811.22	800.23	10.99	800.23	788.55	11.68	788.55	777.85	10.7	865.16			832.1	33.06
15	C				847.77	830.66	17.11	830.66	813.83	16.83	813.83	796.54	17.29	942.18			893.06	49.12
16	C				856.4	845.2	11.2	845.2	833.88	11.32	833.88	823.94	9.94	865.26			830.69	34.57
17	C				861.91	848.31	13.6	848.31	831.26	17.05	831.26	815.32	15.94	897.7			848.58	49.12
18	C				822.83	812.53	10.3	812.53	804.89	7.64	804.89	796.89	8	863.68			835.29	28.39
19	C				861.81	846.09	15.72	846.09	828.17	17.92	828.17	811.32	16.85	964.94			915.22	49.72
20	C				911.8	900.73	11.07	900.73	888.77	11.96	888.77	880.05	8.72	918.69			887.36	31.33
Male Average Daily Consumption				15.34		Female Average Daily Consumption				10.39								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/12/2012	11/13/2012			11/14/2012			11/15/2012			11/16/2012			11/17/2012	11/18/2012	11/19/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	HOLIDAY			870.23	857.25	12.98	857.25	843.54	13.71	843.54	831.34	12.2	865.24			831.03	34.21
22	L				900.16	888.71	11.45	888.71	878.84	9.87	878.84	868.81	10.03	942.6			913.34	29.26
23	L				833.82	819.54	14.28	819.54	803.27	16.27	803.27	789.46	13.81	829.7			788.83	40.87
24	L				854.15	844.73	9.42	844.73	834.69	10.04	834.69	824.8	9.89	904.04			877.61	26.43
25	L				866.12	852.24	13.88	852.24	836.97	15.27	836.97	823.16	13.81	889.94			846.77	43.17
26	L				875.3	865.73	9.57	865.73	857.03	8.7	857.03	849.44	7.59	932.95			905.27	27.68
27	L				876.93	860.79	16.14	860.79	845.3	15.49	845.3	833.26	12.04	906.38			862.85	43.53
28	L				859.7	848.74	10.96	848.74	838.09	10.65	838.09	828.32	9.77	891.63			862.01	29.62
29	L				798.1	782.83	15.27	782.83	765.99	16.84	765.99	751.81	14.18	798.84			752.96	45.88
30	L				894.26	880.9	13.36	880.9	870.53	10.37	870.53	860.85	9.68	860.84			830.23	30.61
31	L				818.79	805.56	13.23	805.56	791.25	14.31	791.25	777.05	14.2	842.38			801.39	40.99
32	L				877.39	866.48	10.91	866.48	853.69	12.79	853.69	844.95	8.74	925.97			895.85	30.12
33	L				813.4	798.22	15.18	798.22	782.93	15.29	782.93	773.22	9.71	876.87			828.49	48.38
34	L				919.12	910.23	8.89	910.23	898.44	11.79	898.44	890.13	8.31	928.6			899.19	29.41
35	L				851.01	835.22	15.79	835.22	818.04	17.18	818.04	805.15	12.89	853.19			809.53	43.66
36	L				870.22	857.86	12.36	857.86	847.98	9.88	847.98	838.62	9.36	892.52			861.34	31.18
37	L				814.29	799.62	14.67	799.62	787.37	12.25	787.37	777.03	10.34	874.42			833.32	41.1
38	L				949.95	938.95	11	938.95	926.59	12.36	926.59	915.63	10.96	945.56			912.6	32.96
39	L				858.1	842.92	15.18	842.92	827.23	15.69	827.23	815.67	11.56	870.54			828.46	42.08
40	L				877.13	867.88	9.25	867.88	857.28	10.6	857.28	849.61	7.67	898.52			869.64	28.88
Male Average Daily Consumption				14.12		Female Average Daily Consumption				10.12								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/12/2012	11/13/2012			11/14/2012			11/15/2012			11/16/2012			11/17/2012	11/18/2012	11/19/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	HOLIDAY			851.07	836.79	14.28	836.79	823.48	13.31	823.48	811.96	11.52	865.88			823	42.88
42	M				878.03	867.36	10.67	867.36	856.89	10.47	856.89	847.24	9.65	874.94			844.69	30.25
143	M				835.58	822.21	13.37	822.21	807.46	14.75	807.46	794.66	12.8	882.07			841.87	40.2
44	M				861.04	849.72	11.32	849.72	840.04	9.68	840.04	831.31	8.73	885.23			854.01	31.22
45	M				817.42	799.94	17.48	799.94	782.96	16.98	782.96	769.02	13.94	882.72			835.75	46.97
46	M				901.59	891.5	10.09	891.5	880.93	10.57	880.93	871.95	8.98	901.51			873.26	28.25
47	M				802.35	785.67	16.68	785.67	771.17	14.5	771.17	757.03	14.14	846.22			803.13	43.09
48	M				877.6	865.79	11.81	865.79	854.57	11.22	854.57	845.45	9.12	875.94			844.05	31.89
49	M				751.51	735.89	15.62	735.89	720.24	15.65	720.24	706.44	13.8	845.9			801.29	44.61
50	M				930.21	919.32	10.89	919.32	907.43	11.89	907.43	896.72	10.71	950.78			919.57	31.21
51	M				815.79	799.81	15.98	799.81	783.11	16.7	783.11	765.53	17.58	864.87			816.42	48.45
52	M				849.37	837.26	12.11	837.26	826.88	10.38	826.88	817.25	9.63	877.39			842.44	34.95
53	M				900.73	886.3	14.43	886.3	872	14.3	872	858.43	13.57	909.7			871.2	38.5
54	M				942.07	931.94	10.13	931.94	919.67	12.27	919.67	910.02	9.65	910.04			879.68	30.36
55	M				785.87	770.5	15.37	770.5	755.29	15.21	755.29	741.62	13.67	873.56			827.67	45.89
56	M				844.9	834.87	10.03	834.87	822.25	12.62	822.25	813.85	8.4	870.64			843.08	27.56
57	M				876.88	862.12	14.76	862.12	847	15.12	847	834.51	12.49	892.34			850.21	42.13
58	M				871.22	860.25	10.97	860.25	849.29	10.96	849.29	841.35	7.94	892.68			863.75	28.93
59	M				866.34	850.04	16.3	850.04	834.3	15.74	834.3	818.08	16.22	874.5			823.71	50.79
60	M				826.59	813.72	12.87	813.72	804.84	8.88	804.84	796.07	8.77	864.24			833.67	30.57
Male Average Daily Consumption				14.85		Female Average Daily Consumption				10.33								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/12/2012	11/13/2012			11/14/2012			11/15/2012			11/16/2012			11/17/2012	11/18/2012	11/19/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	HOLIDAY			907.21	890.56	16.65	890.56	873.87	16.69	873.87	858.36	15.51	936.67			891.36	45.31
62	H				845.93	835.77	10.16	835.77	825.15	10.62	825.15	816.35	8.8	882.32			853.54	28.78
63	H				829.64	813.65	15.99	813.65	799.85	13.8	799.85	786.15	13.7	850.57			807.66	42.91
64	H				896.76	885.94	10.82	885.94	875.47	10.47	875.47	865.18	10.29	897.84			867.86	29.98
65	H				816.09	800.34	15.75	800.34	783.38	16.96	783.38	769.14	14.24	862.16			813.08	49.08
66	H				855.45	844.38	11.07	844.38	834.65	9.73	834.65	824.03	10.62	837.86			808.73	29.13
67	H				874.69	858.54	16.15	858.54	841.43	17.11	841.43	824.12	17.31	857.94			811.98	45.96
68	H				925.64	915.58	10.06	915.58	906.55	9.03	906.55	897.57	8.98	965.98			938.53	27.45
69	H				826.88	809.08	17.8	809.08	794.21	14.87	794.21	779.24	14.97	866.79			820.99	45.8
70	H				872.43	860.25	12.18	860.25	849.67	10.58	849.67	840.86	8.81	894.14			865.33	28.81
71	H				880.08	865.75	14.33	865.75	851.45	14.3	851.45	834.32	17.13	892.5			851.93	40.57
72	H				841.95	831.03	10.92	831.03	821.36	9.67	821.36	812.23	9.13	882.74			853.16	29.58
73	H				883.81	867.57	16.24	867.57	853.77	13.8	853.77	841.94	11.83	894.78			852.93	41.85
74	H				857.88	848.5	9.38	848.5	838.22	10.28	838.22	828.12	10.1	903.86			876.14	27.72
75	H				874.77	858.99	15.78	858.99	845.13	13.86	845.13	830.5	14.63	888.18			845.38	42.8
144	H				854.21	843.52	10.69	843.52	835.56	7.96	835.56	826.96	8.6	890.04			864.68	25.36
77	H				888.23	872.09	16.14	872.09	857.58	14.51	857.58	844.52	13.06	921.7			880.11	41.59
78	H				795.94	783.94	12	783.94	772.63	11.31	772.63	763.37	9.26	862.3			829.5	32.8
79	H				908.09	890.38	17.71	890.38	873.45	16.93	873.45	859.42	14.03	891.84			844.58	47.26
80	H				871.53	859.29	12.24	859.29	847.94	11.35	847.94	837.46	10.48	894.15			859.78	34.37
Male Average Daily Consumption				15.24		Female Average Daily Consumption				10.09								

Food Consumption: Week 8

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/19/2012	11/20/2012			11/21/2012			11/22/2012			11/23/2012			11/24/2012	11/25/2012	11/26/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	824.52	811.79	12.73	811.79	797.73	14.06	797.73		HOLIDAY		769.7	28.03	907.66			858.98	48.68
2	C	856.28	846.3	9.98	846.3	837.29	9.01	837.29				818.64	18.65	870.29			836.12	34.17
3	C	842.83	828.25	14.58	828.25	816.03	12.22	816.03				790.22	25.81	925.84			883.67	42.17
4	C	861.53	853.12	8.41	853.12	845.52	7.6	845.52				827.77	17.75	929.35			897.24	32.11
5	C	843.77	829.14	14.63	829.14	815.3	13.84	815.3				785.39	29.91	840.8			794.18	46.62
6	C	897.65	887.31	10.34	887.31	880.06	7.25	880.06				862.23	17.83	942.8			907	35.8
7	C	813.45	796.9	16.55	796.9	783.96	12.94	783.96				756.92	27.04	868.91			820.39	48.52
8	C	854.17	843.11	11.06	843.11	835.65	7.46	835.65				814.61	21.04	874.02			833.34	40.68
141	C	804.83	790.53	14.3	790.53	776.88	13.65	776.88				749.57	27.31	907.69			856.2	51.49
10	C	850.31	839.12	11.19	839.12	831.42	7.7	831.42				NA	NA	918.03			884.61	33.42
11	C	904.05	889.35	14.7	889.35	873.39	15.96	873.39				842.41	30.98	898.78			848.47	50.31
12	C	859.89	850.79	9.1	850.79	840.63	10.16	840.63				824	16.63	934.75			901.48	33.27
13	C	827.45	813.44	14.01	813.44	796.5	16.94	796.5				765.62	30.88	916.32			865.67	50.65
14	C	832.1	821.94	10.16	821.94	813.16	8.78	813.16				794.46	18.7	870.44			835.46	34.98
15	C	893.06	876.64	16.42	876.64	861.84	14.8	861.84				832.22	29.62	927.61			874.53	53.08
16	C	830.69	821.05	9.64	821.05	812.43	8.62	812.43				788.61	23.82	878.75			841.75	37
17	C	848.58	834.11	14.47	834.11	821.07	13.04	821.07				791.54	29.53	847.24			796.8	50.44
18	C	835.29	827.54	7.75	827.54	819.49	8.05	819.49				804.44	15.05	952.11			920.64	31.47
19	C	915.22	898.85	16.37	898.85	885.06	13.79	885.06				855.16	29.9	929.76			877.13	52.63
20	C	887.36	877.81	9.55	877.81	869.46	8.35	869.46				850.56	18.9	900.33			867.97	32.36
Male Average Daily Consumption				14.98		Female Average Daily Consumption					9.73	#10: Food added before being weighed 'out', not included in average						

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/19/2012	11/20/2012			11/21/2012			11/22/2012			11/23/2012			11/24/2012	11/25/2012	11/26/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	831.03	820.42	10.61	820.42	807.25	13.17	807.25		HOLIDAY		787.74	19.51	834.77			796.8	37.97
22	L	913.34	905.49	7.85	905.49	897.34	8.15	897.34				879.55	17.79	948.59			914.24	34.35
23	L	788.83	774.44	14.39	774.44	761.35	13.09	761.35				735.82	25.53	844.59			795.18	49.41
24	L	877.61	869.12	8.49	869.12	862.12	7	862.12				846.89	15.23	904.94			871.6	33.34
25	L	846.77	834.29	12.48	834.29	821.78	12.51	821.78				795.08	26.7	869.05			820.69	48.36
26	L	905.27	897.54	7.73	897.54	890.22	7.32	890.22				872.55	17.67	937.01			903.62	33.39
27	L	862.85	846.74	16.11	846.74	834.86	11.88	834.86				807.61	27.25	887.29			840.25	47.04
28	L	862.01	852.51	9.5	852.51	843.7	8.81	843.7				825.8	17.9	918.56			881.42	37.14
29	L	752.96	738.87	14.09	738.87	724.61	14.26	724.61				695.57	29.04	843.03			791.37	51.66
30	L	830.23	820.81	9.42	820.81	811.56	9.25	811.56				794.15	17.41	954.15			914.52	39.63
31	L	801.39	786.99	14.4	786.99	774.74	12.25	774.74				751.12	23.62	899.1			849.77	49.33
32	L	895.85	885.72	10.13	885.72	878.67	7.05	878.67				858.1	20.57	894.94			857.76	37.18
33	L	828.49	814.1	14.39	814.1	799.21	14.89	799.21				772.74	26.47	944.34			887.68	56.66
34	L	899.19	889.95	9.24	889.95	881.14	8.81	881.14				864.12	17.02	950.3			912.99	37.31
35	L	809.53	794.77	14.76	794.77	780.96	13.81	780.96				753.1	27.86	855.89			806.09	49.8
36	L	861.34	853.08	8.26	853.08	843.72	9.36	843.72				824.67	19.05	978.62			939.79	38.83
37	L	833.32	819.68	13.64	819.68	807.01	12.67	807.01				782.64	24.37	905.16			857.54	47.62
38	L	912.6	902.52	10.08	902.52	891.47	11.05	891.47				872.57	18.9	944.46			906.79	37.67
39	L	828.46	817.36	11.1	817.36	803.99	13.37	803.99				777.72	26.27	929.47			878.9	50.57
40	L	869.64	862.01	7.63	862.01	853.58	8.43	853.58				838.38	15.2	916.25			886.85	29.4
Male Average Daily Consumption				13.97		Female Average Daily Consumption					9.53							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/19/2012	11/20/2012			11/21/2012			11/22/2012			11/23/2012			11/24/2012	11/25/2012	11/26/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	823	811.59	11.41	811.59	797.56	14.03	797.56		HOLIDAY		771.65	25.91	886.6			837.98	48.62
42	M	844.69	835.68	9.01	835.68	826.63	9.05	826.63				NA	NA	971.55			930.22	41.33
143	M	841.87	828.25	13.62	828.25	815.71	12.54	815.71				806.13	9.58	903.32			856.13	47.19
44	M	854.01	843.98	10.03	843.98	835.84	8.14	835.84				819.73	16.11	888.78			854.02	34.76
45	M	835.75	821.67	14.08	821.67	806.72	14.95	806.72				780.86	25.86	927.53			876.24	51.29
46	M	873.26	864.15	9.11	864.15	857.47	6.68	857.47				842.2	15.27	906.25			872.11	34.14
47	M	803.13	789.39	13.74	789.39	773.92	15.47	773.92				749.17	24.75	861.89			814.84	47.05
48	M	844.05	837.24	6.81	837.24	828.68	8.56	828.68				811.1	17.58	883.46			848.84	34.62
49	M	801.29	787.11	14.18	787.11	774.17	12.94	774.17				746.88	27.29	902.37			851.56	50.81
50	M	919.57	909.97	9.6	909.97	900.5	9.47	900.5				883.41	17.09	942.46			907.73	34.73
51	M	816.42	800.71	15.71	800.71	786.8	13.91	786.8				757.01	29.79	893.66			843.32	50.34
52	M	842.44	833.95	8.49	833.95	823.7	10.25	823.7				805.54	18.16	926.52			886.16	40.36
53	M	871.2	857.86	13.34	857.86	844.86	13	844.86				819.49	25.37	900.28			854.5	45.78
54	M	879.68	868.69	10.99	868.69	861.37	7.32	861.37				842.57	18.8	894.52			859.42	35.1
55	M	827.67	813.98	13.69	813.98	800.5	13.48	800.5				772.64	27.86	884.66			833.64	51.02
56	M	843.08	834.41	8.67	834.41	827.18	7.23	827.18				810.18	17	914.14			877.44	36.7
57	M	850.21	836.88	13.33	836.88	824.7	12.18	824.7				800.51	24.19	847.61			801.43	46.18
58	M	863.75	854.43	9.32	854.43	846.62	7.81	846.62				830.26	16.36	915.49			879.22	36.27
59	M	823.71	808.53	15.18	808.53	792.48	16.05	792.48				763	29.48	888.45			832.04	56.41
60	M	833.67	823.46	10.21	823.46	816.11	7.35	816.11				793.73	22.38	855.47			822.58	32.89
Male Average Daily Consumption				14.17		Female Average Daily Consumption					9.58	#42: Feeder weight overwritten/deleted, not included in average						

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/19/2012	11/20/2012			11/21/2012			11/22/2012			11/23/2012			11/24/2012	11/25/2012	11/26/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	891.36	877.09	14.27	877.09	862.74	14.35	862.74		HOLIDAY		835.7	27.04	923.29			875.03	48.26
62	H	853.54	843.91	9.63	843.91	837.27	6.64	837.27				820.62	16.65	920.56			883.76	36.8
63	H	807.66	793.66	14	793.66	779.83	13.83	779.83				751.07	28.76	805.87			756.18	49.69
64	H	867.86	859.68	8.18	859.68	850.75	8.93	850.75				836.07	14.68	871.06			837.43	33.63
65	H	813.08	800.68	12.4	800.68	786.28	14.4	786.28				755.8	30.48	898.97			846.51	52.46
66	H	808.73	800.57	8.16	800.57	789.43	11.14	789.43				771.98	17.45	836.7			799.77	36.93
67	H	811.98	798.02	13.96	798.02	783.8	14.22	783.8				755.47	28.33	870.84			819.68	51.16
68	H	938.53	930.16	8.37	930.16	921.83	8.33	921.83				904.09	17.74	943.21			912.11	31.1
69	H	820.99	807.11	13.88	807.11	793.23	13.88	793.23				764.53	28.7	800.75			753.47	47.28
70	H	865.33	856.86	8.47	856.86	848.53	8.33	848.53				831.66	16.87	918.5			882.76	35.74
71	H	851.93	837.67	14.26	837.67	824.04	13.63	824.04				795.46	28.58	853.44			804.48	48.96
72	H	853.16	844.01	9.15	844.01	835.44	8.57	835.44				818.12	17.32	916.13			880.63	35.5
73	H	852.93	840.17	12.76	840.17	827.44	12.73	827.44				803.58	23.86	859.68			814.48	45.2
74	H	876.14	867.22	8.92	867.22	859.68	7.54	859.68				840.25	19.43	914.74			879.81	34.93
75	H	845.38	832.47	12.91	832.47	821.77	10.7	821.77				794.17	27.6	897.56			851.27	46.29
144	H	864.68	858.37	6.31	858.37	849.59	8.78	849.59				836.53	13.06	897.97			867.04	30.93
77	H	880.11	866.9	13.21	866.9	855.08	11.82	855.08				828.82	26.26	913.24			867.29	45.95
78	H	829.5	821.65	7.85	821.65	812.22	9.43	812.22				793.17	19.05	865.62			827.57	38.05
79	H	844.58	830.45	14.13	830.45	816.86	13.59	816.86				785.08	31.78	848.68			801.24	47.44
80	H	859.78	852.61	7.17	852.61	845.01	7.6	845.01				826.13	18.88	931.33			895.34	35.99
Male Average Daily Consumption				14.26		Female Average Daily Consumption					9.24				#69: Wet feed/feeder, not used in average			

Food Consumption: Week 9

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/26/2012	11/27/2012			11/28/2012			11/29/2012			11/30/2012			12/1/2012	12/2/2012	12/3/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	858.98	845.44	13.54	845.44	829.71	15.73	829.71	816.14	13.57	816.14	804.47	11.67	883.69			845.01	38.68
2	C	836.12	826.97	9.15	826.97	817.2	9.77	817.2	807.95	9.25	807.95	801.53	6.42	914.81			891.58	23.23
3	C	883.67	868.49	15.18	868.49	854.99	13.5	854.99	842.48	12.51	842.48	833.51	8.97	894.11			861.93	32.18
4	C	897.24	887.77	9.47	887.77	878.25	9.52	878.25	869.37	8.88	869.37	863.21	6.16	913.93			897.28	16.65
5	C	794.18	778.71	15.47	778.71	765.63	13.08	765.63	751.27	14.36	751.27	739.86	11.41	845.91			805.9	40.01
6	C	907	896.99	10.01	896.99	887.07	9.92	887.07	876.42	10.65	876.42	869.5	6.92	869.56			850.3	19.26
7	C	820.39	803.65	16.74	803.65	788.3	15.35	788.3	775.47	12.83	775.47	763.86	11.61	896.81			860.07	36.74
8	C	833.34	821.49	11.85	821.49	810.8	10.69	810.8	798.89	11.91	798.89	789.79	9.1	860.42			840.84	19.58
141	C	856.2	841.16	15.04	841.16	826.85	14.31	826.85	812.49	14.36	812.49	799.72	12.77	852.6			816.32	36.28
10	C	884.61	874.68	9.93	874.68	864.53	10.15	864.53	855.43	9.1	855.43	848.24	7.19	899.06			882.46	16.6
11	C	848.47	833.24	15.23	833.24	816.42	16.82	816.42	800.55	15.87	800.55	789.08	11.47	874.61			835.37	39.24
12	C	901.48	888.11	13.37	888.11	879.18	8.93	879.18	869.59	9.59	869.59	864.1	5.49	864.1			846.04	18.06
13	C	865.67	848.45	17.22	848.45	831.89	16.56	831.89	816.07	15.82	816.07	804.46	11.61	911.27			871.44	39.83
14	C	835.46	824.25	11.21	824.25	814.98	9.27	814.98	804.62	10.36	804.62	796.4	8.22	857.32			839.71	17.61
15	C	874.53	858.38	16.15	858.38	843.75	14.63	843.75	829.84	13.91	829.84	814.46	15.38	834.15			794.76	39.39
16	C	841.75	830.58	11.17	830.58	819.6	10.98	819.6	807.36	12.24	807.36	799.82	7.54	907.02			886.52	20.5
17	C	796.8	780.69	16.11	780.69	765.49	15.2	765.49	751.08	14.41	751.08	737.44	13.64	876.07			837.97	38.1
18	C	920.64	891.11	29.53	891.11	876.71	14.4	876.71	866.88	9.83	866.88	859.03	7.85	859.02			843.49	15.53
19	C	877.13	864.32	12.81	864.32	845.21	19.11	845.21	829.22	15.99	829.22	814.11	15.11	889.24			849.22	40.02
20	C	867.97	856.95	11.02	856.95	844.75	12.2	844.75	836.96	7.79	836.96	830.11	6.85	890.82			873.53	17.29
Male Average Daily Consumption				14.04		Female Average Daily Consumption				8.89					#18: Apparent weighing error, not included in average			

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/26/2012	11/27/2012			11/28/2012			11/29/2012			11/30/2012			12/1/2012	12/2/2012	12/3/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	796.8	783.7	13.1	783.7	769.88	13.82	769.88	757.7	12.18	757.7	748.6	9.1	866.59			833.44	33.15
22	L	914.24	904.99	9.25	904.99	895.36	9.63	895.36	883.18	12.18	883.18	875.98	7.2	943.79			922.54	21.25
23	L	795.18	780.93	14.25	780.93	765.8	15.13	765.8	753.8	12	753.8	740.96	12.84	878.09			840.06	38.03
24	L	871.6	862.02	9.58	862.02	852.69	9.33	852.69	843.99	8.7	843.99	838.1	5.89	878.96			860.83	18.13
25	L	820.69	805.17	15.52	805.17	792.1	13.07	792.1	779.64	12.46	779.64	767.85	11.79	935.48			899.23	36.25
26	L	903.62	894.61	9.01	894.61	885.01	9.6	885.01	875.52	9.49	875.52	869.47	6.05	937.05			916.29	20.76
27	L	840.25	825.02	15.23	825.02	809.97	15.05	809.97	796.3	13.67	796.3	785.69	10.61	890.15			851.99	38.16
28	L	881.42	871.2	10.22	871.2	860.49	10.71	860.49	851.89	8.6	851.89	844.59	7.3	844.58			826.3	18.28
29	L	791.37	776.25	15.12	776.25	761.49	14.76	761.49	745.81	15.68	745.81	732.74	13.07	852.55			810.31	42.24
30	L	914.52	904.23	10.29	904.23	893.02	11.21	893.02	881.27	11.75	881.27	873.13	8.14	912.88			889.13	23.75
31	L	849.77	835.15	14.62	835.15	825.04	10.11	825.04	812.72	12.32	812.72	801.77	10.95	873.23			839.08	34.15
32	L	857.76	848.6	9.16	848.6	837.68	10.92	837.68	827.21	10.47	827.21	818.43	8.78	902.73			878.15	24.58
33	L	887.68	870.35	17.33	870.35	856.05	14.3	856.05	840.88	15.17	840.88	828.72	12.16	893.04			855.68	37.36
34	L	912.99	902.78	10.21	902.78	892.46	10.32	892.46	883.62	8.84	883.62	876.18	7.44	921.62			899.05	22.57
35	L	806.09	790.93	15.16	790.93	776.08	14.85	776.08	763.65	12.43	763.65	750.55	13.1	871.48			833.56	37.92
36	L	939.79	928.88	10.91	928.88	918.94	9.94	918.94	908.6	10.34	908.6	901.41	7.19	956.02			934.54	21.48
37	L	857.54	842.54	15	842.54	827.7	14.84	827.7	814.68	13.02	814.68	802.57	12.11	931.26			897.12	34.14
38	L	906.79	896.2	10.59	896.2	886.01	10.19	886.01	876.94	9.07	876.94	868.47	8.47	908.97			886.19	22.78
39	L	878.9	863.2	15.7	863.2	850.48	12.72	850.48	838.26	12.22	838.26	826.82	11.44	876.93			841.37	35.56
40	L	886.85	877.92	8.93	877.92	868.59	9.33	868.59	860.28	8.31	860.28	853.65	6.63	903.23			885.75	17.48
Male Average Daily Consumption				13.21		Female Average Daily Consumption				8.81								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/26/2012	11/27/2012			11/28/2012			11/29/2012			11/30/2012			12/1/2012	12/2/2012	12/3/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	837.98	823.63	14.35	823.63	811	12.63	811	796.68	14.32	796.68	786.71	9.97	924.65			886.12	38.53
42	M	930.22	919.02	11.2	919.02	908.84	10.18	908.84	898.64	10.2	898.64	890.83	7.81	890.85			869.34	21.51
143	M	856.13	842.23	13.9	842.23	828.05	14.18	828.05	814.5	13.55	814.5	804.22	10.28	934.11			899.45	34.66
44	M	854.02	842.45	11.57	842.45	834.72	7.73	834.72	824.98	9.74	824.98	819.51	5.47	871.73			851.25	20.48
45	M	876.24	859.72	16.52	859.72	843.82	15.9	843.82	828.81	15.01	828.81	816.78	12.03	895.97			857.39	38.58
46	M	872.11	863.1	9.01	863.1	854.37	8.73	854.37	845.61	8.76	845.61	837.91	7.7	837.91			818.45	19.46
47	M	814.84	798.87	15.97	798.87	783.18	15.69	783.18	769.19	13.99	769.19	756.16	13.03	830			794.13	35.87
48	M	848.84	838.54	10.3	838.54	826.9	11.64	826.9	816.86	10.04	816.86	810.84	6.02	929.18			905.49	23.69
49	M	851.56	836.64	14.92	836.64	821.78	14.86	821.78	807.65	14.13	807.65	794.93	12.72	866.27			827.95	38.32
50	M	907.73	897.65	10.08	897.65	888.19	9.46	888.19	879.17	9.02	879.17	872.31	6.86	872.29			853.66	18.63
51	M	843.32	826.44	16.88	826.44	812.69	13.75	812.69	797.13	15.56	797.13	784.79	12.34	863.86			822.33	41.53
52	M	886.16	877.22	8.94	877.22	865.99	11.23	865.99	853.75	12.24	853.75	845.66	8.09	930.54			905.34	25.2
53	M	854.5	841.65	12.85	841.65	829.27	12.38	829.27	814.84	14.43	814.84	804.15	10.69	878.4			842.1	36.3
54	M	859.42	848.7	10.72	848.7	840.28	8.42	840.28	830.39	9.89	830.39	823.87	6.52	854.92			830.91	24.01
55	M	833.64	818.6	15.04	818.6	802.65	15.95	802.65	788.65	14	788.65	777.4	11.25	871			829.6	41.4
56	M	877.44	868.33	9.11	868.33	857.44	10.89	857.44	848.46	8.98	848.46	841.12	7.34	922.17			899.3	22.87
57	M	801.43	786.01	15.42	786.01	774.75	11.26	774.75	760.87	13.88	760.87	751.4	9.47	863.57			826.72	36.85
58	M	879.22	868.74	10.48	868.74	859.74	9	859.74	849.81	9.93	849.81	843.41	6.4	843.39			826.51	16.88
59	M	832.04	815.27	16.77	815.27	801.1	14.17	801.1	783.19	17.91	783.19	772.3	10.89	841.33			800.47	40.86
60	M	822.58	812.39	10.19	812.39	802.56	9.83	802.56	791.7	10.86	791.7	788.15	3.55	895.48			868.02	27.46
Male Average Daily Consumption				13.61		Female Average Daily Consumption				8.75								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	11/26/2012	11/27/2012			11/28/2012			11/29/2012			11/30/2012			12/1/2012	12/2/2012	12/3/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	875.03	859.13	15.9	859.13	846.32	12.81	846.32	832.93	13.39	832.93	819.77	13.16	999.78			960.02	39.76
62	H	883.76	875.37	8.39	875.37	866.41	8.96	866.41	857.31	9.1	857.31	850.37	6.94	902.91			882.37	20.54
63	H	756.18	740.78	15.4	740.78	726.32	14.46	726.32	711.87	14.45	711.87	699.98	11.89	857.74			816.71	41.03
64	H	837.43	829.21	8.22	829.21	819.48	9.73	819.48	809.93	9.55	809.93	802.96	6.97	888.7			864.69	24.01
65	H	846.51	832.11	14.4	832.11	816.04	16.07	816.04	802.12	13.92	802.12	790.19	11.93	885.67			847.25	38.42
66	H	799.77	790.82	8.95	790.82	779.71	11.11	779.71	770.32	9.39	770.32	762.26	8.06	889.73			862.94	26.79
67	H	819.68	803.11	16.57	803.11	788.5	14.61	788.5	774.35	14.15	774.35	760.31	14.04	888.93			849.11	39.82
68	H	912.11	902.69	9.42	902.69	893.17	9.52	893.17	884.44	8.73	884.44	877.68	6.76	937.52			915	22.52
69	H	753.47	738.47	15	738.47	723.89	14.58	723.89	709.13	14.76	709.13	696.23	12.9	867.07			824.07	43
70	H	882.76	872.28	10.48	872.28	862.34	9.94	862.34	852.1	10.24	852.1	845.14	6.96	907.41			887.29	20.12
71	H	804.48	790.97	13.51	790.97	777.38	13.59	777.38	764.91	12.47	764.91	751.98	12.93	934.86			893.19	41.67
72	H	880.63	870.32	10.31	870.32	860.73	9.59	860.73	850.29	10.44	850.29	842.95	7.34	898.14			877.06	21.08
73	H	814.48	802.35	12.13	802.35	786.4	15.95	786.4	774.06	12.34	774.06	762.15	11.91	889.1			848.73	40.37
74	H	879.81	870.17	9.64	870.17	859.53	10.64	859.53	851	8.53	851	843.77	7.23	843.79			825.33	18.46
75	H	851.27	836.78	14.49	836.78	826.93	9.85	826.93	814.76	12.17	814.76	803.17	11.59	888.89			857.55	31.34
144	H	867.04	857.71	9.33	857.71	848	9.71	848	838.73	9.27	838.73	833.48	5.25	892.81			871.46	21.35
77	H	867.29	854.44	12.85	854.44	838.9	15.54	838.9	826.48	12.42	826.48	815.1	11.38	893.35			855.12	38.23
78	H	827.57	819.15	8.42	819.15	809.25	9.9	809.25	799.02	10.23	799.02	791.27	7.75	844.78			820.58	24.2
79	H	801.24	786.13	15.11	786.13	772.02	14.11	772.02	758.63	13.39	758.63	745.74	12.89	929.43			883.8	45.63
80	H	895.34	885.58	9.76	885.58	875.46	10.12	875.46	863.83	11.63	863.83	855.8	8.03	940.7			912.66	28.04
Male Average Daily Consumption				13.56		Female Average Daily Consumption				8.72								

Food Consumption: Week 10

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/3/2012	12/4/2012			12/5/2012			12/6/2012			12/7/2012			12/8/2012	12/9/2012	12/10/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	845.01	828.5	16.51	828.5	811.86	16.64	811.86	791.38	20.48	791.38	778.43	12.95	950.27			906.42	43.85
2	C	891.58	883.18	8.4	883.18	871.03	12.15	871.03	855.65	15.38	855.65	846.69	8.96	910.62			880.6	30.02
3	C	861.93	848.77	13.16	848.77	834.44	14.33	834.44	815.98	18.46	815.98	802.73	13.25	825.79			787.77	38.02
4	C	897.28	889.18	8.1	889.18	879.68	9.5	879.68	867.06	12.62	867.06	860.32	6.74	973.72			948.51	25.21
5	C	805.9	791.9	14	791.9	775.32	16.58	775.32	755.06	20.26	755.06	740.84	14.22	797.73			758.03	39.7
6	C	850.3	840.89	9.41	840.89	830.87	10.02	830.87	815.53	15.34	815.53	807.4	8.13	862.86			835.87	26.99
7	C	860.07	844.44	15.63	844.44	826.86	17.58	826.86	806.93	19.93	806.93	793.02	13.91	945.12			900.98	44.14
8	C	840.84	829.65	11.19	829.65	816.68	12.97	816.68	802.56	14.12	802.56	792.8	9.76	918.96			885.89	33.07
141	C	816.32	800.2	16.12	800.2	782.06	18.14	782.06	760.79	21.27	760.79	747	13.79	909.35			860.25	49.1
10	C	882.46	874.6	7.86	874.6	862	12.6	862	847.39	14.61	847.39	840.98	6.41	919.69			891.37	28.32
11	C	835.37	821.62	13.75	821.62	800.87	20.75	800.87	778.85	22.02	778.85	766.57	12.28	856.83			809.88	46.95
12	C	846.04	837.3	8.74	837.3	825.34	11.96	825.34	811.54	13.8	811.54	802.71	8.83	858.68			829.96	28.72
13	C	871.44	854.37	17.07	854.37	835.1	19.27	835.1	811.32	23.78	811.32	794.89	16.43	982.06			932.93	49.13
14	C	839.71	831.01	8.7	831.01	820.95	10.06	820.95	805.97	14.98	805.97	798.91	7.06	872.85			842.12	30.73
15	C	794.76	779.29	15.47	779.29	758.92	20.37	758.92	736.7	22.22	736.7	721.78	14.92	851.44			803.64	47.8
16	C	886.52	876.18	10.34	876.18	861.54	14.64	861.54	844.83	16.71	844.83	834.58	10.25	934.64			903.65	30.99
17	C	837.97	823.58	14.39	823.58	809.34	14.24	809.34	791.86	17.48	791.86	774.36	17.5	864.54			822.15	42.39
18	C	843.49	835.96	7.53	835.96	824.33	11.63	824.33	808.91	15.42	808.91	802.54	6.37	898.89			874.45	24.44
19	C	849.22	833.07	16.15	833.07	811.49	21.58	811.49	792.35	19.14	792.35	779.45	12.9	948.18			892.64	55.54
20	C	873.53	865.25	8.28	865.25	852.06	13.19	852.06	837.48	14.58	837.48	829.64	7.84	903.88			877.17	26.71
Male Average Daily Consumption				16.62		Female Average Daily Consumption					10.60							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/3/2012	12/4/2012			12/5/2012			12/6/2012			12/7/2012			12/8/2012	12/9/2012	12/10/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	833.44	824.82	8.62	824.82	810.41	14.41	810.41	791.8	18.61	791.8	782.13	9.67	804.39			771.6	32.79
22	L	922.54	915.82	6.72	915.82	905.02	10.8	905.02	891.14	13.88	891.14	883.41	7.73	885.98			861.83	24.15
23	L	840.06	827.08	12.98	827.08	811.47	15.61	811.47	794.3	17.17	794.3	782.74	11.56	854.18			814.71	39.47
24	L	860.83	854.25	6.58	854.25	844.52	9.73	844.52	829.45	15.07	829.45	824.31	5.14	871.39			845.98	25.41
25	L	899.23	888.8	10.43	888.8	870.7	18.1	870.7	849.51	21.19	849.51	836.37	13.14	903.29			862.46	40.83
26	L	916.29	909.92	6.37	909.92	900.94	8.98	900.94	885.94	15	885.94	879.45	6.49	890.03			869.2	20.83
27	L	851.99	838.87	13.12	838.87	826	12.87	826	806.88	19.12	806.88	796.28	10.6	811.29			774.04	37.25
28	L	826.3	818.95	7.35	818.95	808.12	10.83	808.12	795.08	13.04	795.08	787.15	7.93	886.84			859.02	27.82
29	L	810.31	797.01	13.3	797.01	777.47	19.54	777.47	759.23	18.24	759.23	745.19	14.04	890.39			845.15	45.24
30	L	889.13	883.05	6.08	883.05	869.95	13.1	869.95	854.38	15.57	854.38	848.06	6.32	865.93			839.16	26.77
31	L	839.08	827.22	11.86	827.22	812.66	14.56	812.66	794.8	17.86	794.8	786.16	8.64	879.9			839.35	40.55
32	L	878.15	872.68	5.47	872.68	861.04	11.64	861.04	846.02	15.02	846.02	841.67	4.35	914.34			886.5	27.84
33	L	855.68	841.99	13.69	841.99	827.18	14.81	827.18	806.48	20.7	806.48	795.97	10.51	942.97			900.05	42.92
34	L	899.05	893.29	5.76	893.29	880.97	12.32	880.97	867.89	13.08	867.89	863.43	4.46	875.1			851.91	23.19
35	L	833.56	820.01	13.55	820.01	804.23	15.78	804.23	785.43	18.8	785.43	775.4	10.03	843.61			800.87	42.74
36	L	934.54	925.61	8.93	925.61	912.56	13.05	912.56	896.25	16.31	896.25	891.91	4.34	914.08			884.59	29.49
37	L	897.12	883.81	13.31	883.81	867.09	16.72	867.09	845.09	22	845.09	835.1	9.99	940.88			901.22	39.66
38	L	886.19	879.32	6.87	879.32	868.27	11.05	868.27	852.87	15.4	852.87	847.59	5.28	913.77			889.07	24.7
39	L	841.37	828.76	12.61	828.76	814.48	14.28	814.48	794.91	19.57	794.91	785.1	9.81	836.41			795.63	40.78
40	L	885.75	879.83	5.92	879.83	868.1	11.73	868.1	854.99	13.11	854.99	850.2	4.79	879.66			859.38	20.28
Male Average Daily Consumption				14.31		Female Average Daily Consumption					9.30							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/3/2012	12/4/2012			12/5/2012			12/6/2012			12/7/2012			12/8/2012	12/9/2012	12/10/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	886.12	874.44	11.68	874.44	861.52	12.92	861.52	843.68	17.84	843.68	831.11	12.57	899.25			858.97	40.28
42	M	869.34	863.6	5.74	863.6	853.3	10.3	853.3	839.38	13.92	839.38	832.38	7	864.97			836.84	28.13
143	M	899.45	887.84	11.61	887.84	873.12	14.72	873.12	855.96	17.16	855.96	845.57	10.39	876.61			840.62	35.99
44	M	851.25	845.01	6.24	845.01	834.78	10.23	834.78	822.6	12.18	822.6	815.75	6.85	888.74			861.37	27.37
45	M	857.39	844.51	12.88	844.51	828.35	16.16	828.35	808.6	19.75	808.6	794.8	13.8	906.18			859.56	46.62
46	M	818.45	810.93	7.52	810.93	802.09	8.84	802.09	791.59	10.5	791.59	785.4	6.19	909.16			885.81	23.35
47	M	794.13	780.66	13.47	780.66	764.87	15.79	764.87	747.24	17.63	747.24	735.41	11.83	776.91			738.62	38.29
48	M	905.49	899.86	5.63	899.86	889.23	10.63	889.23	876.09	13.14	876.09	869.89	6.2	932.4			907.82	24.58
49	M	827.95	813.93	14.02	813.93	797.89	16.04	797.89	778.32	19.57	778.32	765.43	12.89	915.16			868.98	46.18
50	M	853.66	846.58	7.08	846.58	837.07	9.51	837.07	822.57	14.5	822.57	816.16	6.41	870.88			842.12	28.76
51	M	822.33	810.17	12.16	810.17	792.73	17.44	792.73	772.22	20.51	772.22	758.17	14.05	842.17			796.27	45.9
52	M	905.34	899.06	6.28	899.06	887.87	11.19	887.87	872.98	14.89	872.98	865.96	7.02	902.96			874.36	28.6
53	M	842.1	833.55	8.55	833.55	816.42	17.13	816.42	798.31	18.11	798.31	785.28	13.03	876.9			837.16	39.74
54	M	830.91	825.23	5.68	825.23	814.14	11.09	814.14	799.92	14.22	799.92	796.99	2.93	845.47			814.52	30.95
55	M	829.6	820.02	9.58	820.02	803.91	16.11	803.91	786.85	17.06	786.85	775.18	11.67	845.25			804.2	41.05
56	M	899.3	892.58	6.72	892.58	882.01	10.57	882.01	868.44	13.57	868.44	862.53	5.91	927.65			902.44	25.21
57	M	826.72	816.4	10.32	816.4	799.74	16.66	799.74	783.21	16.53	783.21	772.67	10.54	917.14			875.01	42.13
58	M	826.51	818.72	7.79	818.72	808.39	10.33	808.39	796.2	12.19	796.2	789.25	6.95	890.19			863.83	26.36
59	M	800.47	787.25	13.22	787.25	771.09	16.16	771.09	750.8	20.29	750.8	738.22	12.58	808.64			761.23	47.41
60	M	868.02	860.3	7.72	860.3	849.76	10.54	849.76	836.22	13.54	836.22	829.09	7.13	856.81			830.61	26.2
Male Average Daily Consumption				14.51		Female Average Daily Consumption					9.09							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/3/2012	12/4/2012			12/5/2012			12/6/2012			12/7/2012			12/8/2012	12/9/2012	12/10/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	960.02	947.37	12.65	947.37	930.42	16.95	930.42	911.57	18.85	911.57	898.39	13.18	900.3			858.78	41.52
62	H	882.37	876.11	6.26	876.11	864.82	11.29	864.82	851.69	13.13	851.69	845.05	6.64	849.6			822.53	27.07
63	H	816.71	804.01	12.7	804.01	789.5	14.51	789.5	770.32	19.18	770.32	758.49	11.83	896.32			853.06	43.26
64	H	864.69	857.95	6.74	857.95	848.18	9.77	848.18	835.16	13.02	835.16	827.03	8.13	901.21			876.83	24.38
65	H	847.25	833.94	13.31	833.94	818.47	15.47	818.47	799.41	19.06	799.41	787.35	12.06	958.82			913.12	45.7
66	H	862.94	857.22	5.72	857.22	846.39	10.83	846.39	832.35	14.04	832.35	826.08	6.27	864.96			840.84	24.12
67	H	849.11	834.58	14.53	834.58	817.5	17.08	817.5	798.82	18.68	798.82	785.11	13.71	868.05			823.1	44.95
68	H	915	909.57	5.43	909.57	900.21	9.36	900.21	889.06	11.15	889.06	883.01	6.05	938.05			914.95	23.1
69	H	824.07	810.09	13.98	810.09	793.38	16.71	793.38	773.87	19.51	773.87	763.47	10.4	875.51			829.63	45.88
70	H	887.29	880.77	6.52	880.77	870.72	10.05	870.72	858.93	11.79	858.93	850.96	7.97	911.62			888.21	23.41
71	H	893.19	879.4	13.79	879.4	864.12	15.28	864.12	845.96	18.16	845.96	832.94	13.02	940.72			896.48	44.24
72	H	877.06	869.12	7.94	869.12	859.12	10	859.12	845.12	14	845.12	838.26	6.86	879.51			855.87	23.64
73	H	848.73	838.14	10.59	838.14	823.32	14.82	823.32	805.01	18.31	805.01	792.74	12.27	885.22			846.55	38.67
74	H	825.33	818.84	6.49	818.84	809.45	9.39	809.45	796.96	12.49	796.96	790.54	6.42	872.1			846.08	26.02
75	H	857.55	846.21	11.34	846.21	831.66	14.55	831.66	813.04	18.62	813.04	801.68	11.36	875.48			837.62	37.86
144	H	871.46	866.77	4.69	866.77	857.71	9.06	857.71	843.29	14.42	843.29	836.42	6.87	882.93			863.01	19.92
77	H	855.12	840.4	14.72	840.4	825.3	15.1	825.3	807.68	17.62	807.68	796.1	11.58	845.7			805.61	40.09
78	H	820.58	813.22	7.36	813.22	802.09	11.13	802.09	787.44	14.65	787.44	779.13	8.31	872.99			845.77	27.22
79	H	883.8	869.58	14.22	869.58	851.36	18.22	851.36	833.54	17.82	833.54	820.81	12.73	810.2			762.81	47.39
80	H	912.66	905.76	6.9	905.76	894.42	11.34	894.42	879.89	14.53	879.89	870.12	9.77	953.05			922.15	30.9
Male Average Daily Consumption				14.83		Female Average Daily Consumption					9.12							

Food Consumption: Week 11

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/10/2012	12/11/2012			12/12/2012			12/13/2012			12/14/2012			12/15/2012	12/16/2012	12/17/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	906.42	884.07	22.35	884.07	865.59	18.48	865.59	847.76	17.83	847.76	832.64	15.12	868.74			828.24	40.5
2	C	880.6	862.63	17.97	862.63	848.58	14.05	848.58	835.09	13.49	835.09	824.1	10.99	845.8			819.18	26.62
3	C	787.77	765.63	22.14	765.63	748.57	17.06	748.57	734.25	14.32	734.25	721.65	12.6	822.41			786.18	36.23
4	C	948.51	931.51	17	931.51	918.1	13.41	918.1	906.02	12.08	906.02	897.94	8.08	939.51			913.75	25.76
5	C	758.03	736.25	21.78	736.25	718.13	18.12	718.13	701.68	16.45	701.68	689.31	12.37	825.44			782.3	43.14
6	C	835.87	818.33	17.54	818.33	802.88	15.45	802.88	806.37	-3.49	762.5	750.45	12.05	795.08			763.8	31.28
7	C	900.98	875.63	25.35	875.63	858.87	16.76	858.87	842.1	16.77	842.1	826.28	15.82	845.17			805.9	39.27
8	C	885.89	868.03	17.86	868.03	853.45	14.58	853.45	838.79	14.66	838.79	829.21	9.58	866.78			837.11	29.67
141	C	860.25	835.85	24.4	835.85	818.24	17.61	818.24	801.62	16.62	801.62	784.33	17.29	863.99			819.75	44.24
10	C	891.37	874.09	17.28	874.09	859.09	15	859.09	844.24	14.85	844.24	834.88	9.36	882.79			853.97	28.82
11	C	809.88	787.54	22.34	787.54	770.03	17.51	770.03	752.76	17.27	821.35	801.66	19.69	801.66			757.86	43.8
12	C	829.96	813.3	16.66	813.3	799.14	14.16	799.14	787.11	12.03	863.84	850.89	12.95	850.89			824.98	25.91
13	C	932.93	906.92	26.01	906.92	885.83	21.09	885.83	866.67	19.16	922.82	901.24	21.58	901.24			857.93	43.31
14	C	842.12	824.34	17.78	824.34	810.52	13.82	810.52	798.28	12.24	868.48	855.43	13.05	855.43			827.62	27.81
15	C	803.64	780.85	22.79	780.85	761.64	19.21	761.64	742.51	19.13	847.75	828.22	19.53	828.22			778.88	49.34
16	C	903.65	888.38	15.27	888.38	872.93	15.45	872.93	859.14	13.79	931.18	915.34	15.84	915.34			885.65	29.69
17	C	822.15	795.81	26.34	795.81	776.72	19.09	776.72	759.52	17.2	855.14	834.11	21.03	834.11			789.22	44.89
18	C	874.45	858.63	15.82	858.63	844.67	13.96	844.67	NA	NA	918.4	906.71	11.69	906.71			886.34	20.37
19	C	892.64	870.36	22.28	870.36	848.04	22.32	848.04	832.37	15.67	916.67	896.36	20.31	896.36			849.61	46.75
20	C	877.17	859.31	17.86	859.31	845.02	14.29	845.02	831.72	13.3	884.5	873.56	10.94	873.56			845.38	28.18
Male Average Daily Consumption				18.25		Female Average Daily Consumption					13.07				#6: Wet feed/feeder, not used in average			
															#18: Food added before being weighed out; not included in average			

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/10/2012	12/11/2012			12/12/2012			12/13/2012			12/14/2012			12/15/2012	12/16/2012	12/17/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	771.6	753.11	18.49	753.11	737.14	15.97	737.14	721.6	15.54	721.6	709.94	11.66	878.24			843.13	35.11
22	L	861.83	845.75	16.08	845.75	830.16	15.59	830.16	817.08	13.08	817.08	807.03	10.05	909.79			881.38	28.41
23	L	814.71	793.57	21.14	793.57	776.27	17.3	776.27	758.34	17.93	758.34	742.38	15.96	793.5			750.8	42.7
24	L	845.98	830.67	15.31	830.67	818.01	12.66	818.01	805.43	12.58	805.43	795.86	9.57	926.56			899.83	26.73
25	L	862.46	840.7	21.76	840.7	819.83	20.87	819.83	802.88	16.95	802.88	787.63	15.25	866.15			825.44	40.71
26	L	869.2	855.51	13.69	855.51	842.98	12.53	842.98	830.03	12.95	830.03	821.49	8.54	918.34			889.82	28.52
27	L	774.04	752.48	21.56	752.48	733.75	18.73	733.75	714.81	18.94	714.81	699.5	15.31	750.22			707.04	43.18
28	L	859.02	844.26	14.76	844.26	830.63	13.63	830.63	818.72	11.91	818.72	807.21	11.51	912.36			881.82	30.54
29	L	845.15	821.7	23.45	821.7	801.39	20.31	801.39	783.37	18.02	783.37	766.33	17.04	816.76			772.12	44.64
30	L	839.16	820.4	18.76	820.4	805.47	14.93	805.47	793	12.47	793	781.16	11.84	877.12			846.57	30.55
31	L	839.35	816.91	22.44	816.91	799.85	17.06	799.85	782.48	17.37	934.91	916.4	18.51	916.4			877.17	39.23
32	L	886.5	868.97	17.53	868.97	854.98	13.99	854.98	842.61	12.37	920.72	908.44	12.28	908.44			880.79	27.65
33	L	900.05	874.89	25.16	874.89	858.02	16.87	858.02	840.07	17.95	945.65	927.6	18.05	927.6			882.6	45
34	L	851.91	835.82	16.09	835.82	823	12.82	823	811.22	11.78	885	873.92	11.08	873.92			847.01	26.91
35	L	800.87	778.45	22.42	778.45	759.46	18.99	759.46	743.4	16.06	861.15	842.16	18.99	842.16			797.17	44.99
36	L	884.59	864.66	19.93	864.66	850.92	13.74	850.92	837.92	13	947.95	933.8	14.15	933.8			903.37	30.43
37	L	901.22	876.66	24.56	876.66	857.07	19.59	857.07	843.1	13.97	901.71	885.95	15.76	885.95			848.79	37.16
38	L	889.07	867.39	21.68	867.39	851.88	15.51	851.88	841.42	10.46	942.56	928.4	14.16	928.4			904.16	24.24
39	L	795.63	773.76	21.87	773.76	756.91	16.85	756.91	741.89	15.02	809.96	792.58	17.38	792.58			751.3	41.28
40	L	859.38	843.51	15.87	843.51	830.7	12.81	830.7	819.65	11.05	893.82	882.71	11.11	882.71			857.13	25.58
Male Average Daily Consumption				17.49		Female Average Daily Consumption					12.74				#33: Wet feed/feeder, not used in average			

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/10/2012	12/11/2012			12/12/2012			12/13/2012			12/14/2012			12/15/2012	12/16/2012	12/17/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	858.97	838.92	20.05	838.92	820.92	18	820.92	805.05	15.87	805.05	788.9	16.15	856.37			815.55	40.82
42	M	836.84	821.2	15.64	821.2	806.86	14.34	806.86	794.44	12.42	794.44	784.27	10.17	898.59			868.03	30.56
143	M	840.62	821.42	19.2	821.42	802.07	19.35	802.07	785.26	16.81	785.26	773.92	11.34	830.61			792.64	37.97
44	M	861.37	845.73	15.64	845.73	830.57	15.16	830.57	818.54	12.03	818.54	807.21	11.33	903.23			872.64	30.59
45	M	859.56	836.89	22.67	836.89	816.01	20.88	816.01	798.17	17.84	798.17	778.43	19.74	830.33			786.35	43.98
46	M	885.81	872.28	13.53	872.28	839.96	32.32	839.96	832.59	7.37	832.59	822.16	10.43	921.53			893.71	27.82
47	M	738.62	719.41	19.21	719.41	699.09	20.32	699.09	681.29	17.8	681.29	667.25	14.04	904.03			854.7	49.33
48	M	907.82	893.48	14.34	893.48	879.38	14.1	879.38	867.69	11.69	867.69	856.96	10.73	899.35			870.95	28.4
49	M	868.98	847.29	21.69	847.29	828.23	19.06	828.23	810.11	18.12	810.11	792.47	17.64	877.89			833.83	44.06
50	M	842.12	826.58	15.54	826.58	813.61	12.97	813.61	802.13	11.48	802.13	792.67	9.46	865.35			835.12	30.23
51	M	796.27	772.46	23.81	772.46	750.43	22.03	750.43	733.77	16.66	795.69	776.46	19.23	776.46			726.59	49.87
52	M	874.36	855.02	19.34	855.02	841.71	13.31	841.71	828.85	12.86	935.16	922.23	12.93	922.23			891.11	31.12
53	M	837.16	813.7	23.46	813.7	797.38	16.32	797.38	781.52	15.86	900.08	882.21	17.87	882.21			839.77	42.44
54	M	814.52	797.86	16.66	797.86	785.55	12.31	785.55	775.92	9.63	875.03	861.89	13.14	861.89			833	28.89
55	M	804.2	781.22	22.98	781.22	762.39	18.83	762.39	746.08	16.31	823.74	806.01	17.73	806.01			759.58	46.43
56	M	902.44	884.6	17.84	884.6	870.08	14.52	870.08	857.11	12.97	907.4	897.67	9.73	897.67			869.91	27.76
57	M	875.01	850.87	24.14	850.87	833.94	16.93	833.94	819.14	14.8	907.78	890.94	16.84	890.94			853	37.94
58	M	863.83	846.86	16.97	846.86	833.62	13.24	833.62	823.53	10.09	956.78	944.57	12.21	944.57			918.11	26.46
59	M	761.23	738.16	23.07	738.16	716.37	21.79	716.37	698.72	17.65	924.68	902.66	22.02	902.66			855.92	46.74
60	M	830.61	814.89	15.72	814.89	800.22	14.67	800.22	788.47	11.75	882.33	869.07	13.26	869.07			840.11	28.96
Male Average Daily Consumption				18.01		Female Average Daily Consumption					12.42				#46: Apparent weighing error, not included in average			

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/10/2012	12/11/2012			12/12/2012			12/13/2012			12/14/2012			12/15/2012	12/16/2012	12/17/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	858.78	838	20.78	838	818.51	19.49	818.51	802.63	15.88	802.63	785.27	17.36	843.78			801.74	42.04
62	H	822.53	807.74	14.79	807.74	794.16	13.58	794.16	783.18	10.98	783.18	771.47	11.71	853.67			825.77	27.9
63	H	853.06	830.2	22.86	830.2	810.48	19.72	810.48	791.66	18.82	791.66	773.7	17.96	910.51			864.38	46.13
64	H	876.83	862.06	14.77	862.06	849.05	13.01	849.05	836.98	12.07	836.98	826.26	10.72	874.61			844.42	30.19
65	H	913.12	892.2	20.92	892.2	871.83	20.37	871.83	852.83	19	852.83	838.36	14.47	957.35			911.76	45.59
66	H	840.84	822.87	17.97	822.87	809.51	13.36	809.51	796.97	12.54	796.97	787.28	9.69	870.41			838.71	31.7
67	H	823.1	799.82	23.28	799.82	780.21	19.61	780.21	761.9	18.31	761.9	742.7	19.2	796.59			753.25	43.34
68	H	914.95	902.25	12.7	902.25	885.7	16.55	885.7	872.25	13.45	872.25	864.43	7.82	928.02			900.82	27.2
69	H	829.63	807.97	21.66	807.97	787.28	20.69	787.28	770.13	17.15	770.13	751.83	18.3	888.25			840.85	47.4
70	H	888.21	872.42	15.79	872.42	856.81	15.61	856.81	843.79	13.02	843.79	833.83	9.96	959.15			930.1	29.05
71	H	896.48	874.45	22.03	874.45	856.14	18.31	856.14	838.18	17.96	899.23	880.62	18.61	880.62			838.44	42.18
72	H	855.87	841.01	14.86	841.01	826.38	14.63	826.38	814.01	12.37	907.47	893.64	13.83	893.64			864.61	29.03
73	H	846.55	826.02	20.53	826.02	807.64	18.38	807.64	791.94	15.7	909.45	890.42	19.03	890.42			848.42	42
74	H	846.08	830.1	15.98	830.1	816.59	13.51	816.59	803.47	13.12	909.39	896.42	12.97	896.42			869.71	26.71
75	H	837.62	816.16	21.46	816.16	797.23	18.93	797.23	780.97	16.26	846.57	830.97	15.6	830.97			789.42	41.55
144	H	863.01	847.52	15.49	847.52	834.86	12.66	834.86	824.38	10.48	912.76	900.86	11.9	900.86			876.27	24.59
77	H	805.61	784.88	20.73	784.88	788.32	-3.44	740.75	720.71	20.04	859.84	837.37	22.47	837.37			787.53	49.84
78	H	845.77	829.66	16.11	829.66	814.72	14.94	814.72	800.91	13.81	925.85	911.18	14.67	911.18			880.14	31.04
79	H	762.81	739.7	23.11	739.7	719.28	20.42	719.28	704.63	14.65	806.92	786.26	20.66	786.26			742.95	43.31
80	H	922.15	903.11	19.04	903.11	887.91	15.2	887.91	872.32	15.59	890.82	879.37	11.45	879.37			849.94	29.43
Male Average Daily Consumption				18.34		Female Average Daily Consumption					12.77				#77: Wet feed/feeder, not used in average			

Food Consumption: Week 12

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/17/2012	12/18/2012			12/19/2012			12/20/2012			12/21/2012			12/22/2012	12/23/2012	12/24/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	828.24	814.01	14.23	814.01	799.1	14.91	799.1	784.56	14.54	784.56	769.73	14.83	934.35			879.63	54.72
2	C	819.18	807.02	12.16	807.02	797.45	9.57	797.45	788.01	9.44	788.01	776	12.01	900.39			860.76	39.63
3	C	786.18	773.11	13.07	773.11	759.7	13.41	759.7	747.89	11.81	747.89	732.54	15.35	853.69			805.25	48.44
4	C	913.75	902.83	10.92	902.83	894.65	8.18	894.65	887.4	7.25	887.4	877.67	9.73	1009.47			972.9	36.57
5	C	782.3	765.31	16.99	765.31	751.18	14.13	751.18	737.69	13.49	737.69	721.8	15.89	845.58			794.36	51.22
6	C	763.8	751.19	12.61	751.19	742.24	8.95	742.24	731.14	11.1	731.14			858.49			818.57	39.92
7	C	805.9	788.19	17.71	788.19	773.33	14.86	773.33	758.73	14.6	758.73	741.3	17.43	902.41			849.95	52.46
8	C	837.11	825.39	11.72	825.39	812.09	13.3	812.09	798.6	13.49	798.6	790.74	7.86	961.18			917.04	44.14
141	C	819.75	804.26	15.49	804.26	789.57	14.69	789.57	774.38	15.19	774.38	758.29	16.09	916.48			863.09	53.39
10	C	853.97	844.07	9.9	844.07	833.14	10.93	833.14	821.99	11.15	821.99	811.75	10.24	971.31			929.91	41.4
11	C	757.86	741.8	16.06	741.8	725.33	16.47	725.33	708.12	17.21	837.47	818.34	19.13	818.34			764.88	53.46
12	C	824.98	813.62	11.36	813.62	805.48	8.14	805.48	795.64	9.84	853.71	841.88	11.83	841.88			809.15	32.73
13	C	857.93	841.01	16.92	841.01	824.06	16.95	824.06	807.2	16.86	883.66	864.78	18.88	864.78			813.71	51.07
14	C	827.62	817.11	10.51	817.11	805.74	11.37	805.74	795.36	10.38	852.68	839.62	13.06	839.62			806.08	33.54
15	C	778.88	760.56	18.32	760.56	745.17	15.39	745.17	729.64	15.53	894.03	873.86	20.17	873.86			820.15	53.71
16	C	885.65	872.54	13.11	872.54	859.48	13.06	859.48	849.16	10.32	894.73	881.12	13.61	881.12			844.73	36.39
17	C	789.22	773.5	15.72	773.5	757.39	16.11	757.39	741.86	15.53	917.57	900.37	17.2	900.37			848.71	51.66
18	C	886.34	875.22	11.12	875.22	866.66	8.56	866.66	858.14	8.52	884.41	874.23	10.18	874.23			843.99	30.24
19	C	849.61	833.19	16.42	833.19	817.78	15.41	817.78	802.36	15.42	875.3	858.11	17.19	858.11			811.17	46.94
20	C	845.38	834.29	11.09	834.29	823.41	10.88	823.41	814.37	9.04	895.43	882.23	13.2	882.23			850.98	31.25
Male Average Daily Consumption				16.16			Female Average Daily Consumption				11.05	#6: Food added before being weighed out; not included in average						

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/17/2012	12/18/2012			12/19/2012			12/20/2012			12/21/2012			12/22/2012	12/23/2012	12/24/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	843.13	830.22	12.91	830.22	816.7	13.52	816.7	805.11	11.59	805.11	791.31	13.8	880.9			837.81	43.09
22	L	881.38	871.06	10.32	871.06	861.52	9.54	861.52	851.11	10.41	851.11	840.13	10.98	872.99			838.06	34.93
23	L	750.8	736.48	14.32	736.48	719.5	16.98	719.5	704.2	15.3	704.2	688.5	15.7	826.54			773.75	52.79
24	L	899.83	889.65	10.18	889.65	879.84	9.81	879.84	870.16	9.68	870.16	860.82	9.34	915.34			881.93	33.41
25	L	825.44	809.12	16.32	809.12	793.8	15.32	793.8	780.28	13.52	780.28	764.05	16.23	840.47			790.58	49.89
26	L	889.82	879.63	10.19	879.63	870.21	9.42	870.21	860.81	9.4	860.81	851.34	9.47	904.59			870.34	34.25
27	L	707.04	690.37	16.67	690.37	675.18	15.19	675.18	661.01	14.17	661.01	642.92	18.09	882.07			822.7	59.37
28	L	881.82	871.1	10.72	871.1	859.19	11.91	859.19	847.91	11.28	847.91	838.65	9.26	896.3			858.2	38.1
29	L	772.12	755.47	16.65	755.47	738.71	16.76	738.71	724.4	14.31	724.4	706.11	18.29	821.42			764.83	56.59
30	L	846.57	833.57	13	833.57	822.36	11.21	822.36	810.76	11.6	810.76	797.57	13.19	936			893.21	42.79
31	L	877.17	867.25	9.92	867.25	849.13	18.12	849.13	834.46	14.67	926.52	910.38	16.14	910.38			862.14	48.24
32	L	880.79	870.19	10.6	870.19	859.34	10.85	859.34	846.57	12.77	939.27	926.67	12.6	926.67			888.56	38.11
33	L	882.6	866.52	16.08	866.52	850.62	15.9	850.62	836.26	14.36	923.88	906.07	17.81	906.07			854.74	51.33
34	L	847.01	839.41	7.6	839.41	828.6	10.81	828.6	817.86	10.74	905.45	895.72	9.73	895.72			861.19	34.53
35	L	797.17	780.19	16.98	780.19	763.33	16.86	763.33	746.73	16.6	927.88	910.75	17.13	910.75			857.67	53.08
36	L	903.37	892.34	11.03	892.34	881.81	10.53	881.81	869.93	11.88	931.66	921.59	10.07	921.59			885.13	36.46
37	L	848.79	834.97	13.82	834.97	820.12	14.85	820.12	805.68	14.44	959	942.17	16.83	942.17			893.54	48.63
38	L	904.16	892.51	11.65	892.51	881.96	10.55	881.96	869.81	12.15	907.98	895.16	12.82	895.16			859.9	35.26
39	L	751.3	737.28	14.02	737.28	721.04	16.24	721.04	706.4	14.64	911.46	893.67	17.79	893.67			845.57	48.1
40	L	857.13	847.97	9.16	847.97	839.51	8.46	839.51	828.19	11.32	921.75	912.79	8.96	912.79			880.17	32.62
Male Average Daily Consumption				15.78			Female Average Daily Consumption				10.91							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/17/2012	12/18/2012			12/19/2012			12/20/2012			12/21/2012			12/22/2012	12/23/2012	12/24/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	815.55	799.05	16.5	799.05	784.77	14.28	784.77	770.27	14.5	770.27	754.32	15.95	837.13			785.45	51.68
42	M	868.03	857.63	10.4	857.63	848.53	9.1	848.53	837.64	10.89	837.64	826.5	11.14	910.25			873.56	36.69
143	M	792.64	778.91	13.73	778.91	763.84	15.07	763.84	748.42	15.42	748.42	735.12	13.3	935.89			880.92	54.97
44	M	872.64	860.1	12.54	860.1	847.49	12.61	847.49	836.01	11.48	836.01	825.64	10.37	877.06			838.38	38.68
45	M	786.35	769.61	16.74	769.61	752.91	16.7	752.91	736.54	16.37	736.54	718.4	18.14	872.13			814.16	57.97
46	M	893.71	884.51	9.2	884.51	873.59	10.92	873.59	862.55	11.04	862.55	854.61	7.94	968.9			932.63	36.27
47	M	854.7	836.75	17.95	836.75	820.84	15.91	820.84	804.77	16.07	804.77	788.95	15.82	829.27			776.37	52.9
48	M	870.95	860.77	10.18	860.77	849.07	11.7	849.07	837.83	11.24	837.83	826.71	11.12	892.42			856.31	36.11
49	M	833.83	816.24	17.59	816.24	800.13	16.11	800.13	783.91	16.22	783.91			874.6			817.36	57.24
50	M	835.12	823.64	11.48	823.64	813.04	10.6	813.04	802.51	10.53	802.51	791.01	11.5	952.63			913.25	39.38
51	M	726.59	709.75	16.84	709.75	691.59	18.16	691.59	673.9	17.69	950.81	928.33	22.48	928.33			869.26	59.07
52	M	891.11	880.44	10.67	880.44	869.35	11.09	869.35	858.23	11.12	905.45	891.58	13.87	891.58			857.23	34.35
53	M	839.77	823.95	15.82	823.95	808.68	15.27	808.68	794.28	14.4	914.92	897.3	17.62	897.3			848.8	48.5
54	M	833	821.09	11.91	821.09	810.19	10.9	810.19	798.69	11.5	905.18	893.66	11.52	893.66			853.65	40.01
55	M	759.58	744.72	14.86	744.72	729.28	15.44	729.28	714.04	15.24	917.39	898.08	19.31	898.08			846.19	51.89
56	M	869.91	858.26	11.65	858.26	848.31	9.95	848.31	837.87	10.44	882.05	872.03	10.02	872.03			836.72	35.31
57	M	853	838.85	14.15	838.85	825.81	13.04	825.81	810.55	15.26	930.03	913.38	16.65	913.38			864.95	48.43
58	M	918.11	908.19	9.92	908.19	898.17	10.02	898.17	887.33	10.84	945.59	935.29	10.3	935.29			899.81	35.48
59	M	855.92	838.42	17.5	838.42	822.43	15.99	822.43	805.03	17.4	908.05	889.21	18.84	889.21			831.24	57.97
60	M	840.11	828.96	11.15	828.96	819.28	9.68	819.28	806.44	12.84	866.46	855.75	10.71	855.75			819.44	36.31
Male Average Daily Consumption				16.62			Female Average Daily Consumption				11.18	#49: Food added before being weighed out; not included in average						

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/17/2012	12/18/2012			12/19/2012			12/20/2012			12/21/2012			12/22/2012	12/23/2012	12/24/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	801.74	784.65	17.09	784.65	769.23	15.42	769.23	754.71	14.52	754.71	736.61	18.1	834.18			779.56	54.62
62	H	825.77	814.85	10.92	814.85	805.57	9.28	805.57	793.43	12.14	793.43	782.49	10.94	889.39			850.92	38.47
63	H	864.38	848.07	16.31	848.07	833.11	14.96	833.11	817.99	15.12	817.99	800.21	17.78	878.22			825.63	52.59
64	H	844.42	834.36	10.06	834.36	820.39	13.97	820.39	811.03	9.36	811.03	800.45	10.58	964.5			922.46	42.04
65	H	911.76	892.37	19.39	892.37	879.12	13.25	879.12	863.02	16.1	863.02	847.2	15.82	899.58			842.96	56.62
66	H	838.71	828.59	10.12	828.59	817.13	11.46	817.13	806.9	10.23	806.9	794.53	12.37	871.58			833.95	37.63
67	H	753.25	735.37	17.88	735.37	716.99	18.38	716.99	699.48	17.51	699.48	680.88	18.6	798.65			738.44	60.21
68	H	900.82	891.4	9.42	891.4	879.5	11.9	879.5	870.63	8.87	870.63	859.15	11.48	945.46			906.56	38.9
69	H	840.85	824.69	16.16	824.69	808.36	16.33	808.36	793.44	14.92	793.44	774.95	18.49	870.96			817.84	53.12
70	H	930.1	919.19	10.91	919.19	908.95	10.24	908.95	898.59	10.36	898.59	886.16	12.43	951.49			913.26	38.23
71	H	838.44	821.31	17.13	821.31	806.81	14.5	806.81	790.61	16.2	901.86	884.43	17.43	884.43			832.4	52.03
72	H	864.61	853.11	11.5	853.11	841.13	11.98	841.13	831.53	9.6	884.23	872.78	11.45	872.78			834.41	38.37
73	H	848.42	833.88	14.54	833.88	844.24	-10.36	791.67	767.79	23.88	925.96	902.08	23.88	902.08			848.64	53.44
74	H	869.71	859.04	10.67	859.04	848.34	10.7	848.34	837.93	10.41	888.23	877.82	10.41	877.82			841.22	36.6
75	H	789.42	772.89	16.53	772.89	756.52	16.37	756.52	741.28	15.24	905.16	888.51	16.65	888.51			839.33	49.18
144	H	876.27	864.67	11.6	864.67	854.91	9.76	854.91	846.55	8.36	903.16	892.51	10.65	892.51			858.44	34.07
77	H	787.53	770.41	17.12	770.41	753.61	16.8	753.61	738.64	14.97	904.28	884.56	19.72	884.56			831.16	53.4
78	H	880.14	870.37	9.77	870.37	858.4	11.97	858.4	846.8	11.6	931.03	916.26	14.77	916.26			878.34	37.92
79	H	742.95	727.42	15.53	727.42	710.63	16.79	710.63	696.12	14.51	858	837.1	20.9	837.1			781.14	55.96
80	H	849.94	836.01	13.93	836.01	824.95	11.06	824.95	815.68	9.27	924.27	911.62	12.65	911.62			871.3	40.32
Male Average Daily Consumption				17.17			Female Average Daily Consumption				11.33				#73: Wet feed/feeder, not used in average			

Food Consumption: Week 13

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/24/2012	12/25/2012			12/26/2012			12/27/2012			12/28/2012			12/29/2012	12/30/2012	12/31/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	879.63		HOLIDAY			Base closed		838.03	41.6	838.03	825.81	12.22	940.95			894.6	46.35
2	C	860.76							827.62	33.14	827.62	820.95	6.67	951.31			915.16	36.15
3	C	805.25							764.46	40.79	764.46	752.35	12.11	911.97			867.43	44.54
4	C	972.9							944.94	27.96	944.94	935.68	9.26	976.09			947.65	28.44
5	C	794.36							752.83	41.53	752.83	739.58	13.25	934.81			880.76	54.05
6	C	818.57							789.44	29.13	789.44	779.94	9.5	916.67			882.72	33.95
7	C	849.95							807.77	42.18	807.77	793.57	14.2	865.52			815.92	49.6
8	C	917.04							883.12	33.92	883.12	875.16	7.96	948.12			914.86	33.26
141	C	863.09							819.93	43.16	819.93	806.92	13.01	946.56			896.91	49.65
10	C	929.91							897.31	32.6	897.31	888.11	9.2	971.31			939.9	31.41
11	C	764.88							718.84	46.04	718.84	705.31	13.53	909.41			859.32	50.09
12	C	809.15							777.84	31.31	777.84	771.52	6.32	844.55			811.17	33.38
13	C	813.71							765.07	48.64	765.07	749.94	15.13	877.32			825.91	51.41
14	C	806.08							775.81	30.27	775.81	768.74	7.07	912.29			873.66	38.63
15	C	820.15							771.1	49.05	771.1	756.81	14.29	918.65			861.18	57.47
16	C	844.73							811.64	33.09	811.64	803.12	8.52	924.5			886.78	37.72
17	C	848.71							805.5	43.21	805.5	791.99	13.51	859.36			813.49	45.87
18	C	843.99							818.03	25.96	818.03	810.3	7.73	924.8			892.6	32.2
19	C	811.17							766.58	44.59	766.58	754.34	12.24	866.06			814.2	51.86
20	C	850.98							822.08	28.9	822.08	813.35	8.73	974.33			940.65	33.68
Male Average Daily Consumption				14.91		Female Average Daily Consumption				9.87								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/24/2012	12/25/2012			12/26/2012			12/27/2012			12/28/2012			12/29/2012	12/30/2012	12/31/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	837.81		HOLIDAY			Base Closed		801.07	36.74	801.07	790	11.07	891.99			854.32	37.67
22	L	838.06							806.75	31.31	806.75	798.81	7.94	952			918.08	33.92
23	L	773.75							728.74	45.01	728.74	716.26	12.48	844.96			798.54	46.42
24	L	881.93							854.37	27.56	854.37	846.46	7.91	971.23			940.96	30.27
25	L	790.58							750.4	40.18	750.4	736.27	14.13	927.52			878.37	49.15
26	L	870.34							842.64	27.7	842.64	833.35	9.29	874.33			848.4	25.93
27	L	822.7							778.2	44.5	778.2	764.59	13.61	900.23			851.77	48.46
28	L	858.2							827.39	30.81	827.39	819.06	8.33	916.83			884.43	32.4
29	L	764.83							718.04	46.79	718.04	704.44	13.6	943.83			887.91	55.92
30	L	893.21							863.28	29.93	863.28	855.22	8.06	917.54			884.63	32.91
31	L	862.14							823.8	38.34	823.8	811.52	12.28	883.53			842.85	40.68
32	L	888.56							857.02	31.54	857.02	850.11	6.91	927.49			896.92	30.57
33	L	854.74							806.03	48.71	806.03	791.68	14.35	903.77			857.63	46.14
34	L	861.19							834.35	26.84	834.35	827.14	7.21	921.21			892.37	28.84
35	L	857.67							811.07	46.6	811.07	797.86	13.21	929.31			882.5	46.81
36	L	885.13							853.86	31.27	853.86	845.26	8.6	895.19			862.72	32.47
37	L	893.54							849.73	43.81	849.73	837.4	12.33	953.62			908.21	45.41
38	L	859.9							828.05	31.85	828.05	818.27	9.78	922.78			888.82	33.96
39	L	845.57							803.12	42.45	803.12	791.25	11.87	896.29			851.71	44.58
40	L	880.17							852.45	27.72	852.45	844.61	7.84	937.29			908.81	28.48
Male Average Daily Consumption				14.24		Female Average Daily Consumption				9.47								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/24/2012	12/25/2012			12/26/2012			12/27/2012			12/28/2012			12/29/2012	12/30/2012	12/31/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	785.45		HOLIDAY			Base Closed		743.79	41.66	743.79	730.52	13.27	887.6			842.66	44.94
42	M	873.56							840.38	33.18	840.38	830.32	10.06	904.45			871.21	33.24
143	M	880.92							837.14	43.78	837.14	824.11	13.03	903.91			861.78	42.13
44	M	838.38							807.15	31.23	807.15	798.49	8.66	934.46			899.37	35.09
45	M	814.16							765.07	49.09	765.07	751.29	13.78	961.54			906.01	55.53
46	M	932.63							903.53	29.1	903.53	896.04	7.49	995.7			965.24	30.46
47	M	776.37							733.24	43.13	733.24	719.13	14.11	810.74			764.18	46.56
48	M	856.31							826.06	30.25	826.06	818.15	7.91	883.11			851.7	31.41
49	M	817.36							770.44	46.92	770.44	756.11	14.33	922.92			869.55	53.37
50	M	913.25							881.46	31.79	881.46	873.53	7.93	935.01			901.64	33.37
51	M	869.26							821.34	47.92	821.34	806.52	14.82	860.43			809.23	51.2
52	M	857.23							824.53	32.7	824.53	815.02	9.51	918			882.1	35.9
53	M	848.8							824.53	24.27	824.53	791.04	33.49	901.06			852.38	48.68
54	M	853.65							822.09	31.56	822.09	817.04	5.05	881.12			849.31	31.81
55	M	846.19							800.31	45.88	800.31	787.68	12.63	841.85			794.85	47
56	M	836.72							806.82	29.9	806.82	797.39	9.43	901.29			870.48	30.81
57	M	864.95							825.09	39.86	825.09	815.1	9.99	988.43			944.02	44.41
58	M	899.81							870.7	29.11	870.7	863.96	6.74	957.06			926.37	30.69
59	M	831.24							781.58	49.66	781.58	767.06	14.52	914.09			859.43	54.66
60	M	819.44							789.95	29.49	789.95	780.96	8.99	823.65			791.82	31.83
Male Average Daily Consumption				15.36		Female Average Daily Consumption				9.76								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/24/2012	12/25/2012			12/26/2012			12/27/2012			12/28/2012			12/29/2012	12/30/2012	12/31/2012	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	779.56		HOLIDAY			Base Closed		734.94	44.62	734.94	722.46	12.48	849.97			801.81	48.16
62	H	850.92							822.62	28.3	822.62	814.44	8.18	902.19			870.83	31.36
63	H	825.63							778.16	47.47	778.16	764.66	13.5	899.92			846.69	53.23
64	H	922.46							893.01	29.45	893.01	884.67	8.34	984.26			954.39	29.87
65	H	842.96							795.26	47.7	795.26	780.5	14.76	840.03			790.91	49.12
66	H	833.95							803.8	30.15	803.8	794.74	9.06	879.07			847.37	31.7
67	H	738.44							689.43	49.01	689.43	672.17	17.26	894.29			838.94	55.35
68	H	906.56							878.58	27.98	878.58	869.7	8.88	975.92			943.86	32.06
69	H	817.84							774.07	43.77	774.07	758.38	15.69	816.84			769.61	47.23
70	H	913.26							878.97	34.29	878.97	868.77	10.2	904.83			877.65	27.18
71	H	832.4							789.19	43.21	789.19	775.79	13.4	965.36			911	54.36
72	H	834.41							803.15	31.26	803.15	793.29	9.86	944.79			877.92	66.87
73	H	848.64							802.16	46.48	802.16	787.57	14.59	872.79			825.27	47.52
74	H	841.22							810.57	30.65	810.57	801.22	9.35	893.25			862	31.25
75	H	839.33							796.27	43.06	796.27	783.42	12.85	928.09			880.22	47.87
144	H	858.44							832.25	26.19	832.25	824.76	7.49	980.08			951.62	28.46
77	H	831.16							786.85	44.31	786.85	773.73	13.12	911.43			860.63	50.8
78	H	878.34							845.9	32.44	845.9	835.57	10.33	894.91			861.21	33.7
79	H	781.14							732.17	48.97	732.17	718.76	13.41	911.64			856.91	54.73
80	H	871.3							839.48	31.82	839.48	831.5	7.98	911.22			879.29	31.93
Male Average Daily Consumption				15.45		Female Average Daily Consumption				10.18								

Food Consumption: Week 14

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/31/2012	1/1/2013			1/2/2013			1/3/2013			1/4/2013			1/5/2013	1/6/2013	1/7/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	894.6		HOLIDAY		859.94	34.66	859.94	847.37	12.57	847.37	833.82	13.55	888.17			848.69	39.48
2	C	915.16				888.8	26.36	888.8	880.84	7.96	880.84	870.61	10.23	909.56			879.45	30.11
3	C	867.43				838.8	28.63	838.8	827.05	11.75	827.05	815.33	11.72	878.72			839.48	39.24
4	C	947.65				924.55	23.1	924.55	917.86	6.69	917.86	909.11	8.75	923.53			896.1	27.43
5	C	880.76				846.83	33.93	846.83	833.62	13.21	833.62	818.23	15.39	881.69			836.13	45.56
6	C	882.72				858.97	23.75	858.97	850.06	8.91	850.06	842.26	7.8	870.7			840.49	30.21
7	C	815.92				782.52	33.4	782.52	769.67	12.85	769.67	754.67	15	849.06			803.91	45.15
8	C	914.86				889.31	25.55	889.31	881.54	7.77	881.54	873.53	8.01	891.32			860.17	31.15
141	C	896.91				862.47	34.44	862.47	847.27	15.2	847.27	834.76	12.51	852.96			805.76	47.2
10	C	939.9				913.99	25.91	913.99	904.8	9.19	904.8	896.63	8.17	952.65			921.24	31.41
11	C	859.32				823.13	36.19	823.13	809.22	13.91	809.22	796.57	12.65	833.75			790.69	43.06
12	C	811.17				788.16	23.01	788.16	780.38	7.78	780.38	772.7	7.68	787.79			758.31	29.48
13	C	825.91				787.5	38.41	787.5	770.03	17.47	770.03	755.46	14.57	838.87			786.31	52.56
14	C	873.66				850.33	23.33	850.33	841.63	8.7	841.63	832.42	9.21	870.36			838.03	32.33
15	C	861.18				822.76	38.42	822.76	807.01	15.75	807.01	791.64	15.37	867			814	53
16	C	886.78				860.3	26.48	860.3	852.09	8.21	852.09	842.54	9.55	906.41			872.67	33.74
17	C	813.49				779.66	33.83	779.66	766.7	12.96	766.7	752.58	14.12	829.83			785.04	44.79
18	C	892.6				873.75	18.85	873.75	863.94	9.81	863.94	857.06	6.88	882.06			854.84	27.22
19	C	814.2				780.2	34	780.2	765.56	14.64	765.56	750.27	15.29	818.21			769.98	48.23
20	C	940.65				914.84	25.81	914.84	908.04	6.8	908.04	899.78	8.26	908.74			877.09	31.65
Male Average Daily Consumption				15.15		Female Average Daily Consumption				9.73								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/31/2012	1/1/2013			1/2/2013			1/3/2013			1/4/2013			1/5/2013	1/6/2013	1/7/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	854.32		HOLIDAY		826.35	27.97	826.35	815.07	11.28	815.07	806.1	8.97	947.92			905.63	42.29
22	L	918.08				895.11	22.97	895.11	885.43	9.68	885.43	877.87	7.56	878			848.49	29.51
23	L	798.54				764.56	33.98	764.56	750.5	14.06	750.5	734.08	16.42	824.92			778.08	46.84
24	L	940.96				918.57	22.39	918.57	909.17	9.4	909.17	900.68	8.49	887.92			861.95	25.97
25	L	878.37				843.4	34.97	843.4	828.76	14.64	828.76	815.45	13.31	913.34			866.8	46.54
26	L	848.4				823.7	24.7	823.7	816.78	6.92	816.78	809.08	7.7	843.29			814.7	28.59
27	L	851.77				817.86	33.91	817.86	804.18	13.68	804.18	789.75	14.43	902.17			854.11	48.06
28	L	884.43				856.94	27.49	856.94	846.5	10.44	846.5	838.33	8.17	864.42			835.2	29.22
29	L	887.91				851.87	36.04	851.87	835.45	16.42	835.45	818.45	17	960.82			908.22	52.6
30	L	884.63				858.86	25.77	858.86	848.65	10.21	848.65	837.7	10.95	880.19			846.3	33.89
31	L	842.85				811.84	31.01	811.84	800.08	11.76	800.08	788.01	12.07	875.35			832.46	42.89
32	L	896.92				872.6	24.32	872.6	862.72	9.88	862.72	853.17	9.55	884			852.28	31.72
33	L	857.63				821.08	36.55	821.08	808.29	12.79	808.29	793.46	14.83	854.39			807.55	46.84
34	L	892.37				870.09	22.28	870.09	860.55	9.54	860.55	851.43	9.12	890.12			861.07	29.05
35	L	882.5				843.54	38.96	843.54	829.17	14.37	829.17	816.29	12.88	920.98			873.77	47.21
36	L	862.72				838.06	24.66	838.06	829.43	8.63	829.43	819.53	9.9	867.5			833.89	33.61
37	L	908.21				876.06	32.15	876.06	861.83	14.23	861.83	847.48	14.35	887.37			843.6	43.77
38	L	888.82				863.4	25.42	863.4	853.1	10.3	853.1	842.51	10.59	856.57			825.84	30.73
39	L	851.71				818.69	33.02	818.69	803.6	15.09	803.6	790.89	12.71	899.27			855.42	43.85
40	L	908.81				892	16.81	892	883.91	8.09	883.91	876.03	7.88	916.25			890.84	25.41
Male Average Daily Consumption				14.96		Female Average Daily Consumption				10.02								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/31/2012	1/1/2013			1/2/2013			1/3/2013			1/4/2013			1/5/2013	1/6/2013	1/7/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	842.66		HOLIDAY		809.53	33.13	809.53	798.22	11.31	798.22	785.72	12.5	904.71			861.07	43.64
42	M	871.21				845.51	25.7	845.51	836.64	8.87	836.64	826.33	10.31	868.65			834.48	34.17
143	M	861.78				828.88	32.9	828.88	814.84	14.04	814.84	800.51	14.33	868.63			827.81	40.82
44	M	899.37				874.58	24.79	874.58	865.77	8.81	865.77	855.58	10.19	887.74			855.07	32.67
45	M	906.01				867.33	38.68	867.33	851.88	15.45	851.88	835.89	15.99	859.94			811.69	48.25
46	M	965.24				944.67	20.57	944.67	934.95	9.72	934.95	925.78	9.17	888.71			860.75	27.96
47	M	764.18				727.87	36.31	727.87	713.91	13.96	713.91	700.26	13.65	860.08			809.59	50.49
48	M	851.7				828.02	23.68	828.02	818.57	9.45	818.57	810.13	8.44	853.98			821.52	32.46
49	M	869.55				834.01	35.54	834.01	819.4	14.61	819.4	804.95	14.45	857.95			807.64	50.31
50	M	901.64				879.25	22.39	879.25	870.27	8.98	870.27	860.61	9.66	893.04			861.06	31.98
51	M	809.23				771.93	37.3	771.93	757.78	14.15	757.78	740.12	17.66	903.38			849.99	53.39
52	M	882.1				859.76	22.34	859.76	848.74	11.02	848.74	839.34	9.4	892.13			859.16	32.97
53	M	852.38				817.05	35.33	817.05	804.29	12.76	804.29	790.93	13.36	899.99			853.44	46.55
54	M	849.31				826.57	22.74	826.57	818.05	8.52	818.05	808.23	9.82	878.03			849.5	28.53
55	M	794.85				760.37	34.48	760.37	746.65	13.72	746.65	732.62	14.03	836.11			788.4	47.71
56	M	870.48				847.12	23.36	847.12	838.5	8.62	838.5	830.12	8.38	861.25			832.6	28.65
57	M	944.02				909.23	34.79	909.23	897.91	11.32	897.91	884.41	13.5	893.9			850.69	43.21
58	M	926.37				903.09	23.28	903.09	895.68	7.41	895.68	886.78	8.9	890.07			861.46	28.61
59	M	859.43				822.89	36.54	822.89	808.81	14.08	808.81	794.15	14.66	869.72			817.1	52.62
60	M	791.82				769.59	22.23	769.59	760.41	9.18	760.41	750.3	10.11	851.87			817.97	33.9
Male Average Daily Consumption				15.40		Female Average Daily Consumption				10.11								

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	12/31/2012	1/1/2013			1/2/2013			1/3/2013			1/4/2013			1/5/2013	1/6/2013	1/7/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	801.81		HOLIDAY		767.87	33.94	767.87	754.94	12.93	754.94	740.91	14.03	873.58			824.27	49.31
62	H	870.83				846.98	23.85	846.98	837.92	9.06	837.92	827.51	10.41	883.56			853.38	30.18
63	H	846.69				813.92	32.77	813.92	800.53	13.39	800.53	786.27	14.26	864.76			815.27	49.49
64	H	954.39				931	23.39	931	921.68	9.32	921.68	911.77	9.91	922.39			891.93	30.46
65	H	790.91				755.73	35.18	755.73	740.26	15.47	740.26	726.57	13.69	848.31			795.64	52.67
66	H	847.37				824.87	22.5	824.87	814.68	10.19	814.68	806.02	8.66	931.47			897.91	33.56
67	H	838.94				803.65	35.29	803.65	789.08	14.57	789.08	774.09	14.99	869.35			813.19	56.16
68	H	943.86				921.72	22.14	921.72	911.83	9.89	911.83	903.37	8.46	911.65			883.29	28.36
69	H	769.61				735.38	34.23	735.38	722.07	13.31	722.07	708.81	13.26	971.06			918.5	52.56
70	H	877.65				854.4	23.25	854.4	846.18	8.22	846.18	837.66	8.52	903.41			876.04	27.37
71	H	911				880.34	30.66	880.34	866.61	13.73	866.61	852	14.61	878.94			830.6	48.34
72	H	877.92				853.33	24.59	853.33	842.47	10.86	842.47	832.93	9.54	957.47			924.31	33.16
73	H	825.27				791.78	33.49	791.78	778.01	13.77	778.01	763.16	14.85	874.55			823.37	51.18
74	H	862				839.79	22.21	839.79	831.58	8.21	831.58	822.99	8.59	886.88			855.48	31.4
75	H	880.22				848.22	32	848.22	835.71	12.51	835.71	822.02	13.69	968.4			924.83	43.57
144	H	951.62				929.75	21.87	929.75	922.72	7.03	922.72	913.79	8.93	948.75			920.72	28.03
77	H	860.63				827.15	33.48	827.15	813.34	13.81	813.34	798.29	15.05	852.03			791.45	60.58
78	H	861.21				837.95	23.26	837.95	827.81	10.14	827.81	818.39	9.42	910.66			875.25	35.41
79	H	856.91				818.79	38.12	818.79	806.51	12.28	806.51	789.91	16.6	849.27			800.07	49.2
80	H	879.29				854.86	24.43	854.86	847.11	7.75	847.11	839.02	8.09	915.04			879.69	35.35
Male Average Daily Consumption				15.54		Female Average Daily Consumption				10.03								

Food Consumption: Week 15

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	1/7/2013	1/8/2013			1/9/2013			1/10/2013			1/11/2013			1/12/2013	1/13/2013	1/14/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
1	C	848.69	833.5	15.19	833.5	822.06	11.44	822.06	807.02	15.04	807.02	795.8	11.22	795.8			757.35	38.45
2	C	879.45	869.17	10.28	869.17	861.8	7.37	861.8	851.68	10.12	851.68	843.02	8.66	843.02			815.48	27.54
3	C	839.48	823.38	16.1	823.38	812.5	10.88	812.5	800.12	12.38	800.12	789.02	11.1	789.02			755.85	33.17
4	C	896.1	886.28	9.82	886.28	879.52	6.76	879.52	870.19	9.33	870.19	863.5	6.69	863.5			842.02	21.48
5	C	836.13	820.08	16.05	820.08	807.38	12.7	807.38	792.09	15.29	792.09	779.76	12.33	779.76			739.23	40.53
6	C	840.49	827.83	12.66	827.83	822.29	5.54	822.29	812.62	9.67	812.62	805.12	7.5	805.12			778.97	26.15
7	C	803.91	788.33	15.58	788.33	775.75	12.58	775.75	762.42	13.33	762.42	748.63	13.79	748.63			707.96	40.67
8	C	860.17	848.96	11.21	848.96	838.41	10.55	838.41	828.81	9.6	828.81	818.42	10.39	818.42			790.11	28.31
141	C	805.76	789.27	16.49	789.27	776.6	12.67	776.6	761.01	15.59	761.01	748.93	12.08	748.93			704.54	44.39
10	C	921.24	913.82	7.42	913.82	904.17	9.65	904.17	892.64	11.53	892.64	884.37	8.27	884.37			859.3	25.07
11	C	790.69	774.84	15.85	774.84	763.99	10.85	763.99	748.97	15.02	748.97	735.51	13.46	735.51			693.28	42.23
12	C	758.31	748.57	9.74	748.57	740.97	7.6	740.97	730.56	10.41	730.56	720.61	9.95	720.61			695.4	25.21
13	C	786.31	768.41	17.9	768.41	754.07	14.34	754.07	736.67	17.4	736.67	722.14	14.53	722.14			678.85	43.29
14	C	838.03	828.2	9.83	828.2	819.95	8.25	819.95	809.58	10.37	809.58	802.31	7.27	802.31			777.33	24.98
15	C	814	796.73	17.27	796.73	782.46	14.27	782.46	767.06	15.4	767.06	751.53	15.53	751.53			703.5	48.03
16	C	872.67	861.8	10.87	861.8	853.76	8.04	853.76	843.28	10.48	843.28	834.39	8.89	834.39			804.97	29.42
17	C	785.04	769	16.04	769	756.87	12.13	756.87	741.75	15.12	741.75	727.7	14.05	727.7			685.33	42.37
18	C	854.84	842.6	12.24	842.6	836.33	6.27	836.33	827.9	8.43	827.9	821.92	5.98	821.92			796.56	25.36
19	C	769.98	755.12	14.86	755.12	742.32	12.8	742.32	725.27	17.05	725.27	713.63	11.64	713.63			669.03	44.6
20	C	877.09	868.93	8.16	868.93	862.08	6.85	862.08	851.96	10.12	851.96	844.74	7.22	844.74			819.5	25.24
Male Average Daily Consumption				14.13		Female Average Daily Consumption					8.92							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	1/7/2013	1/8/2013			1/9/2013			1/10/2013			1/11/2013			1/12/2013	1/13/2013	1/14/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
21	L	905.63	892.99	12.64	892.99	881.55	11.44	881.55	868.73	12.82	868.73	856.52	12.21	856.52			822.48	34.04
22	L	848.49	838.24	10.25	838.24	829.76	8.48	829.76	819.2	10.56	819.2	810.78	8.42	810.78			785.8	24.98
23	L	778.08	763.8	14.28	763.8	748.73	15.07	748.73	734.38	14.35	734.38	721.02	13.36	721.02			677.57	43.45
24	L	861.95	852.79	9.16	852.79	844.63	8.16	844.63	834.69	9.94	834.69	827.29	7.4	827.29			804.11	23.18
25	L	866.8	853.42	13.38	853.42	838.22	15.2	838.22	824.03	14.19	824.03	812.56	11.47	812.56			770.57	41.99
26	L	814.7	805.76	8.94	805.76	797.65	8.11	797.65	788.65	9	788.65	780.95	7.7	780.95			758.13	22.82
27	L	854.11	839.74	14.37	839.74	826.76	12.98	826.76	810.66	16.1	810.66	797.51	13.15	797.51			757.66	39.85
28	L	835.2	825.6	9.6	825.6	816.8	8.8	816.8	807.65	9.15	807.65	798.56	9.09	798.56			775.34	23.22
29	L	908.22	892.39	15.83	892.39	876.05	16.34	876.05	860.61	15.44	860.61	847.26	13.35	847.26			806.09	41.17
30	L	846.3	836.36	9.94	836.36	824.88	11.48	824.88	815.39	9.49	815.39	807.09	8.3	807.09			777.42	29.67
31	L	832.46	820.83	11.63	820.83	808.73	12.1	808.73	796.66	12.07	796.66	785.96	10.7	785.96			749.2	36.76
32	L	852.28	844.33	7.95	844.33	832.7	11.63	832.7	824.76	7.94	824.76	817.52	7.24	817.52			788.73	28.79
33	L	807.55	793.76	13.79	793.76	779.58	14.18	779.58	764.06	15.52	764.06	750.08	13.98	750.08			707.53	42.55
34	L	861.07	851.79	9.28	851.79	843.51	8.28	843.51	833.84	9.67	833.84	826.12	7.72	826.12			800.17	25.95
35	L	873.77	858.82	14.95	858.82	843.65	15.17	843.65	828.54	15.11	828.54	814.47	14.07	814.47			772.15	42.32
36	L	833.89	825.1	8.79	825.1	815.5	9.6	815.5	806.13	9.37	806.13	798.12	8.01	798.12			769.39	28.73
37	L	843.6	829.78	13.82	829.78	816.53	13.25	816.53	803.16	13.37	803.16	791.84	11.32	791.84			751.99	39.85
38	L	825.84	814.43	11.41	814.43	805.8	8.63	805.8	794.36	11.44	794.36	787.27	7.09	787.27			759.97	27.3
39	L	855.42	841.79	13.63	841.79	827.42	14.37	827.42	812.11	15.31	812.11	800.8	11.31	800.8			762.37	38.43
40	L	890.84	882.79	8.05	882.79	875.06	7.73	875.06	866.52	8.54	866.52	858.72	7.8	858.72			836.53	22.19
Male Average Daily Consumption				13.62		Female Average Daily Consumption					8.88							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	1/7/2013	1/8/2013			1/9/2013			1/10/2013			1/11/2013			1/12/2013	1/13/2013	1/14/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
41	M	861.07	846.78	14.29	846.78	835.22	11.56	835.22	821.32	13.9	821.32	808.99	12.33	808.99			768.23	40.76
42	M	834.48	824.28	10.2	824.28	814.87	9.41	814.87	805.07	9.8	805.07	797.88	7.19	797.88			769.34	28.54
143	M	827.81	812.02	15.79	812.02	798.71	13.31	798.71	785.13	13.58	785.13	773.07	12.06	773.07			735.77	37.3
44	M	855.07	845.38	9.69	845.38	836.66	8.72	836.66	827.01	9.65	827.01	819.04	7.97	819.04			792.69	26.35
45	M	811.69	796	15.69	796	779.84	16.16	779.84	764.52	15.32	764.52	751.25	13.27	751.25			705.35	45.9
46	M	860.75	851.08	9.67	851.08	842.03	9.05	842.03	833.56	8.47	833.56	827.17	6.39	827.17			801.78	25.39
47	M	809.59	792.73	16.86	792.73	780	12.73	780	764.53	15.47	764.53	749.54	14.99	749.54			707.55	41.99
48	M	821.52	813.09	8.43	813.09	802.66	10.43	802.66	793.23	9.43	793.23	785.49	7.74	785.49			758.81	26.68
49	M	807.64	793.98	13.66	793.98	778.47	15.51	778.47	762.9	15.57	762.9	749.45	13.45	749.45			705.47	43.98
50	M	861.06	850.54	10.52	850.54	841.47	9.07	841.47	830.38	11.09	830.38	823.68	6.7	823.68			797.87	25.81
51	M	849.99	832.88	17.11	832.88	818.98	13.9	818.98	804.51	14.47	804.51	791.2	13.31	791.2			747.03	44.17
52	M	859.16	847.93	11.23	847.93	838.31	9.62	838.31	827.85	10.46	827.85	819.75	8.1	819.75			792.37	27.38
53	M	853.44	837.92	15.52	837.92	824.29	13.63	824.29	811.05	13.24	811.05	797.83	13.22	797.83			757.47	40.36
54	M	849.5	839.43	10.07	839.43	828.97	10.46	828.97	820.37	8.6	820.37	812.05	8.32	812.05			784.15	27.9
55	M	788.4	771.12	17.28	771.12	757.57	13.55	757.57	743.99	13.58	743.99	731.16	12.83	731.16			689.4	41.76
56	M	832.6	823.54	9.06	823.54	814.66	8.88	814.66	806.18	8.48	806.18	797.76	8.42	797.76			771.5	26.26
57	M	850.69	836.43	14.26	836.43	823.27	13.16	823.27	811.28	11.99	811.28	801.91	9.37	801.91			762.47	39.44
58	M	861.46	852.01	9.45	852.01	842.48	9.53	842.48	833.8	8.68	833.8	826.88	6.92	826.88			800.27	26.61
59	M	817.1	801.28	15.82	801.28	785.79	15.49	785.79	770.97	14.82	770.97	756.37	14.6	756.37			709.42	46.95
60	M	817.97	808.95	9.02	808.95	799.23	9.72	799.23	789.41	9.82	789.41	782.34	7.07	782.34			754.74	27.6
Male Average Daily Consumption				14.15		Female Average Daily Consumption					9.02							

	Day	Monday	Tuesday			Wednesday			Thursday			Friday			Saturday	Sunday	Monday	
	Date	1/7/2013	1/8/2013			1/9/2013			1/10/2013			1/11/2013			1/12/2013	1/13/2013	1/14/2013	
ID	Group	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Food Out	Food Consumed	Food In	Weekend		Food Out	Weekend Consumption
61	H	824.27	807.6	16.67	807.6	795.02	12.58	795.02	780.6	14.42	780.6	768.34	12.26	768.34			728.18	40.16
62	H	853.38	842.81	10.57	842.81	835.02	7.79	835.02	825.74	9.28	825.74	819.45	6.29	819.45			795.11	24.34
63	H	815.27	798.38	16.89	798.38	784.92	13.46	784.92	769.86	15.06	769.86	756.25	13.61	756.25			711.85	44.4
64	H	891.93	880.95	10.98	880.95	871.56	9.39	871.56	862.22	9.34	862.22	852.3	9.92	852.3			825.6	26.7
65	H	795.64	777.37	18.27	777.37	762.66	14.71	762.66	747.92	14.74	747.92	732.97	14.95	732.97			689.68	43.29
66	H	897.91	888.16	9.75	888.16	880.07	8.09	880.07	869.12	10.95	869.12	861.01	8.11	861.01			835.81	25.2
67	H	813.19	797.45	15.74	797.45	781.02	16.43	781.02	764.72	16.3	764.72	749.45	15.27	749.45			699.89	49.56
68	H	883.29	871.74	11.55	871.74	864.68	7.06	864.68	856.68	8	856.68	848.77	7.91	848.77			825.53	23.24
69	H	918.5	902.41	16.09	902.41	889.15	13.26	889.15	876.18	12.97	876.18	862.83	13.35	862.83			821.5	41.33
70	H	876.04	864.84	11.2	864.84	856.46	8.38	856.46	848.2	8.26	848.2	841.03	7.17	841.03			818.91	22.12
71	H	830.6	813.91	16.69	813.91	801.64	12.27	801.64	788.92	12.72	788.92	774.32	14.6	774.32			734.09	40.23
72	H	924.31	912.87	11.44	912.87	903.93	8.94	903.93	895.63	8.3	895.63	887.31	8.32	887.31			862.23	25.08
73	H	823.37	807.77	15.6	807.77	793.64	14.13	793.64	779.07	14.57	779.07	764.89	14.18	764.89			721.96	42.93
74	H	855.48	845.75	9.73	845.75	836.43	9.32	836.43	826.26	10.17	826.26	817.45	8.81	817.45			794.97	22.48
75	H	924.83	907.66	17.17	907.66	895.6	12.06	895.6	882.16	13.44	882.16	870.72	11.44	870.72			833.58	37.14
144	H	920.72	909.88	10.84	909.88	902.37	7.51	902.37	894.58	7.79	894.58	889.42	5.16	889.42			865.82	23.6
77	H	791.45	775.04	16.41	775.04	761.53	13.51	761.53	745.42	16.11	745.42	732.61	12.81	732.61			689.56	43.05
78	H	875.25	863.38	11.87	863.38	854.32	9.06	854.32	847.59	6.73	847.59	846.31	1.28	846.31			804.18	42.13
79	H	800.07	783.23	16.84	783.23	767.32	15.91	767.32	753.15	14.17	753.15	739.22	13.93	739.22			694.38	44.84
80	H	879.69	871.31	8.38	871.31	860.21	11.1	860.21	849.55	10.66	849.55	839.28	10.27	839.28			811.4	27.88
Male Average Daily Consumption				14.56		Female Average Daily Consumption					9.02			#78: Apparent weighing error, not included in average				

Food Consumption: Week 16

All Food In and Out weights include the weight of the feeder + the food (in grams)

	Day	Monday			Tuesday					Wednesday		
	Date	1/14/2013			1/15/2013					1/16/2013		
ID	Group	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In
1	C	757.35	754.68	2.67								
2	C	815.48	812.93	2.55								
3	C	755.85	752.04	3.81								
4	C	842.02	839	3.02								
5	C	739.23	734.39	4.84								
6	C	778.97	776.12	2.85								
7	C	707.96	703.22	4.74								
8	C	790.11	787.25	2.86								
141	C	704.54	700.66	3.88								
10	C	859.3	854.94	4.36								
11	C	693.28			675.08	18.2	675.08	672.45	2.63			
12	C	695.4			682.4	13	682.4	680.2	2.2			
13	C	678.85			659.36	19.49	659.36	655.47	3.89			
14	C	777.33			762.61	14.72	762.61	761.39	1.22			
15	C	703.5			684.46	19.04	684.46	681.42	3.04			
16	C	804.97			791.64	13.33	791.64	789.28	2.36			
17	C	685.33			669.03	16.3	669.03	665.18	3.85			
18	C	796.56			787.12	9.44	787.12	782.17	4.95			
19	C	669.03			651.18	17.85	651.18	648.58	2.6			
20	C	819.5			807.86	11.64	807.86	804.67	3.19			
Male Average Daily Consumption				18.18			Female Average Daily Consumption				12.43	

	Day	Monday			Tuesday					Wednesday		
	Date	1/14/2013			1/15/2013					1/16/2013		
ID	Group	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In
21	L	822.48	818.28	4.2								
22	L	785.8	783.19	2.61								
23	L	677.57	674.59	2.98								
24	L	804.11	799.93	4.18								
25	L	770.57	765.09	5.48								
26	L	758.13	754.67	3.46								
27	L	757.66	753.27	4.39								
28	L	775.34	772.64	2.7								
29	L	806.09	801.76	4.33								
30	L	777.42	774.69	2.73								
31	L	749.2			735.29	13.91	735.29	730.69	4.6			
32	L	788.73			778.36	10.37	778.36	774.27	4.09			
33	L	707.53			689.93	17.6	689.93	686.54	3.39			
34	L	800.17			788.88	11.29	788.88	786.11	2.77			
35	L	772.15			755.02	17.13	755.02	749.53	5.49			
36	L	769.39			755.98	13.41	755.98	754.4	1.58			
37	L	751.99			736.09	15.9	736.09	733.6	2.49			
38	L	759.97			747.15	12.82	747.15	744.85	2.3			
39	L	762.37			746.77	15.6	746.77	741.95	4.82			
40	L	836.53			823.12	13.41	823.12	820.91	2.21			
Male Average Daily Consumption				16.03			Female Average Daily Consumption				12.26	

	Day	Monday			Tuesday					Wednesday		
	Date	1/14/2013			1/15/2013					1/16/2013		
ID	Group	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In
41	M	768.23	764.4	3.83								
42	M	769.34	765.85	3.49								
143	M	735.77	733.02	2.75								
44	M	792.69	789.98	2.71								
45	M	705.35	700.93	4.42								
46	M	801.78	795.77	6.01								
47	M	707.55	703.25	4.3								
48	M	758.81	755.08	3.73								
49	M	705.47	701.28	4.19								
50	M	797.87	794.35	3.52								
51	M	747.03			729.24	17.79	729.24	727.15	2.09			
52	M	792.37			778.78	13.59	778.78	776.98	1.8			
53	M	757.47			740.78	16.69	740.78	738.36	2.42			
54	M	784.15			773.62	10.53	773.62	770.62	3			
55	M	689.4			673.46	15.94	673.46	668.83	4.63			
56	M	771.5			759.15	12.35	759.15	757.11	2.04			
57	M	762.47			747.85	14.62	747.85	742.89	4.96			
58	M	800.27			788.46	11.81	788.46	785.16	3.3			
59	M	709.42			692.77	16.65	692.77	688.82	3.95			
60	M	754.74			742.66	12.08	742.66	739.49	3.17			
Male Average Daily Consumption				16.34			Female Average Daily Consumption				12.07	

	Day	Monday			Tuesday					Wednesday		
	Date	1/14/2013			1/15/2013					1/16/2013		
ID	Group	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In	Food Out (FAST)	Food Consumed	Food Out	Food Consumed	Food In
61	H	728.18	725.08	3.1								
62	H	795.11	792.4	2.71								
63	H	711.85	709.59	2.26								
64	H	825.6	822.87	2.73								
65	H	689.68	686.26	3.42								
66	H	835.81	832.93	2.88								
67	H	699.89	696.67	3.22								
68	H	825.53	822.37	3.16								
69	H	821.5	818.81	2.69								
70	H	818.91	815.9	3.01								
71	H	734.09			717.3	16.79	717.3	713.91	3.39			
72	H	862.23			851.01	11.22	851.01	848.1	2.91			
73	H	721.96			704.61	17.35	704.61	700.83	3.78			
74	H	794.97			782.33	12.64	782.33	779.56	2.77			
75	H	833.58			816.53	17.05	816.53	813.98	2.55			
144	H	865.82			856.15	9.67	856.15	853.88	2.27			
77	H	689.56			673.22	16.34	673.22	670.66	2.56			
78	H	804.18			791.42	12.76	791.42	789.07	2.35			
79	H	694.38			676.45	17.93	676.45	671.59	4.86			
80	H	811.4			798.28	13.12	798.28	797.2	1.08			
Male Average Daily Consumption				17.09			Female Average Daily Consumption				11.88	

Ophthalmic Exam Data: Pre-Exposure

Pre-exposure Eye exams				9/19/2012													
Animal ID	Group	Globe	Eye Lids	Conjunctiva	Lacrimal apparatus	Cornea	Sclera	Anterior chamber	Pupil	Posterior chamber	Ciliary body	Lens	Vitreous body	Retina	Choroid	Optic nerve/disc	Notes
1	Control																Normal both eyes
2	Control																Normal both eyes
3	Control																Normal both eyes
4	Control																Normal both eyes
5	Control																Normal both eyes
6	Control																Normal both eyes
7	Control																Normal both eyes
8	Control																Normal both eyes
141	Control																Normal both eyes
10	Control																Normal both eyes
11	Control																Normal both eyes
12	Control																Normal both eyes
13	Control																Normal both eyes
14	Control																Normal both eyes
15	Control																Normal both eyes
16	Control																Normal both eyes
17	Control																Normal both eyes
18	Control																Normal both eyes
19	Control																Normal both eyes
20	Control																Normal both eyes
21	Low																Normal both eyes
22	Low																Normal both eyes
23	Low																Normal both eyes
24	Low																Normal both eyes
25	Low																Normal both eyes
26	Low																Normal both eyes
27	Low																Normal both eyes
28	Low																Normal both eyes
29	Low																Normal both eyes
30	Low																Normal both eyes
31	Low																Normal both eyes
32	Low																Normal both eyes
33	Low																Normal both eyes
34	Low																Normal both eyes
35	Low																Normal both eyes
36	Low																Normal both eyes
37	Low																Normal both eyes
38	Low																Normal both eyes
39	Low																Normal both eyes
40	Low																Normal both eyes
41	Med																Normal both eyes
42	Med																Normal both eyes
143	Med																Normal both eyes
44	Med																Normal both eyes
45	Med																Normal both eyes
46	Med																Normal both eyes
47	Med																Normal both eyes
48	Med																Normal both eyes
49	Med																Normal both eyes
50	Med																Normal both eyes
51	Med																Normal both eyes
52	Med																Normal both eyes
53	Med																Normal both eyes
54	Med																Normal both eyes
55	Med																Normal both eyes
56	Med																Normal both eyes
57	Med																Normal both eyes
58	Med																Normal both eyes
59	Med																Normal both eyes
60	Med																Normal both eyes

Animal ID	Group	Globe	Eye Lids	Conjunctiva	Lacrimal apparatus	Cornea	Sclera	Anterior chamber	Pupil	Posterior chamber	Ciliary body	Lens	Vitreous body	Retina	Choroid	Optic nerve/disc	Notes
61	High																Normal both eyes
62	High																Normal both eyes
63	High																Normal both eyes
64	High																Normal both eyes
65	High																Normal both eyes
66	High																Normal both eyes
67	High																Normal both eyes
68	High																Normal both eyes
69	High																Normal both eyes
70	High																Normal both eyes
71	High																Normal both eyes
72	High																Normal both eyes
73	High																Normal both eyes
74	High																Normal both eyes
75	High																Normal both eyes
144	High																Normal both eyes
77	High																Normal both eyes
78	High																Normal both eyes
79	High																Normal both eyes
80	High																Normal both eyes
ANIMALS NOT USED FOR EXPERIMENT 1																	
9	Assigned to training															x	OS - slight cupping ventral aspect optic disc - remove from experiment 1
43	Assigned to training															x	OD - Unable to visualize optic disc - remove from experiment 1
139	MN +ctrl																Normal both eyes
137	MN +ctrl																Normal both eyes
144	Assigned to training															x	OS - Unable to visualize optic disc - remove from experiment 1

Note: Low = 200 mg/m^3 SB-8; Med = 700 mg/m^3 SB-8; High = 2000 mg/m^3 SB-8

Ophthalmic Exam Data: Week 14

Post-exposure Eye exams

Animal ID	Group	Globe	Eye Lids	Conjunctiva	Lacrimal apparatus	Cornea	Sclera	Anterior chamber	Pupil	Posterior chamber	Ciliary body	Lens	Vitreous body	Retina	Choroid	Optic nerve/disc	Notes
1	Control																Normal both eyes
2	Control																Normal both eyes
3	Control																Normal both eyes
4	Control																Normal both eyes
5	Control																Normal both eyes
6	Control																Normal both eyes
7	Control																Normal both eyes
8	Control																Normal both eyes
141	Control																Normal both eyes
10	Control																Normal both eyes
11	Control																Normal both eyes
12	Control																Normal both eyes
13	Control																Normal both eyes
14	Control																Normal both eyes
15	Control																Normal both eyes
16	Control																Normal both eyes
17	Control																Normal both eyes
18	Control																Normal both eyes
19	Control																Normal both eyes
20	Control																Normal both eyes
21	Low																
22	Low																
23	Low																
24	Low																
25	Low																
26	Low																
27	Low																
28	Low																
29	Low																
30	Low																
31	Low																
32	Low																
33	Low																
34	Low																
35	Low																
36	Low																
37	Low																
38	Low																
39	Low																
40	Low																
41	Med																
42	Med																
143	Med																
44	Med																
45	Med																
46	Med																
47	Med																
48	Med																
49	Med																
50	Med																
51	Med																
52	Med																
53	Med																
54	Med																
55	Med																
56	Med																
57	Med																
58	Med																
59	Med																
60	Med																

Animal ID	Group	Globe	Eye Lids	Conjunctiva	Lacrimal apparatus	Cornea	Sclera	Anterior chamber	Pupil	Posterior chamber	Ciliary body	Lens	Vitreous body	Retina	Choroid	Optic nerve/disc	Notes
61	High																Normal both eyes
62	High																Normal both eyes
63	High																Normal both eyes
64	High																Normal both eyes
65	High																Normal both eyes
66	High																Normal both eyes
67	High																Normal both eyes
68	High																Normal both eyes
69	High																Normal both eyes
70	High																Normal both eyes
71	High																Normal both eyes
72	High																Normal both eyes
73	High		x														Mild blepharitis dorsal OD, otherwise normal
74	High																Normal both eyes
75	High																Normal both eyes
144	High																Normal both eyes
77	High																Normal both eyes
78	High																Normal both eyes
79	High																Normal both eyes
80	High																Normal both eyes

Note: Low = 200 mg/m^3 SB-8; Med = 700 mg/m^3 SB-8; High = 2000 mg/m^3 SB-8; Grey cells: Not examined

APPENDIX C. NEUROTOXICITY TESTING

Male Rat Motor Activity Data following Exposure to SB-8

Subject ID	Treat	Actual Distance cm	Actual Speed cm/sec	Actual Resting Time_Secs	Activity Time_Secs	Total Rears	% in Center	Fine Total	Ambu Total	Chamber
1	C	4128.97	4.39	1523.00	2077.00	93	61.65	826.00	5560	1
21	L	3751.03	4.36	1756.50	1843.50	151	50.16	391.00	6526	2
41	M	4251.11	4.08	1270.40	2329.60	134	56.03	539.00	6902	3
3	C	2579.62	3.61	1665.60	1934.40	104	51.22	365.00	5024	5
23	L	1710.90	4.06	2324.60	1275.40	65	56.01	266.00	3013	6
143	M	1363.44	3.35	2081.20	1518.80	66	47.18	371.00	2655	7
61	H	1839.61	3.19	2218.00	1382.00	97	44.13	348.00	3512	8
25	L	6676.47	5.20	930.00	2670.00	160	57.86	539.00	9222	1
45	M	4098.24	4.44	1527.60	2072.40	111	63.13	482.00	6439	2
63	H	4342.31	4.21	1363.30	2236.70	140	61.31	422.00	7158	3
27	L	2412.79	3.45	1990.10	1609.90	104	52.45	393.00	4370	5
47	M	3018.64	3.63	1579.50	2020.50	125	41.20	441.00	5389	6
65	H	2227.30	3.85	2291.80	1308.20	80	40.06	362.00	4007	7
5	C	2185.76	3.25	1938.90	1661.10	100	48.98	373.00	4157	8
67	H	4911.65	4.59	1247.40	2352.60	128	59.31	419.00	7655	1
7	C	2280.48	4.18	2254.80	1345.20	70	51.92	451.00	3894	2
29	L	4048.82	4.26	1466.40	2133.60	169	57.09	573.00	6352	3
69	H	3116.64	3.54	1546.30	2053.70	159	39.60	451.00	5339	5
141	C	1909.27	4.00	1466.10	2133.90	71	50.58	351.00	3283	6
49	M	1868.93	3.43	1426.70	2173.30	83	41.40	396.00	3650	8
31	L	3476.20	4.13	1640.10	1959.90	156	49.71	419.00	6126	2
51	M	4250.69	4.68	1727.50	1872.50	180	56.43	426.00	6716	3
11	C	2903.73	4.20	2021.60	1578.40	102	52.75	338.00	5184	4
13	C	2708.13	3.74	1640.80	1959.20	133	51.61	318.00	4891	5
33	L	2506.91	3.85	2064.40	1535.60	95	49.65	397.00	4443	6
53	M	1631.00	3.69	2427.20	1172.80	77	47.42	411.00	3037	7
71	H	1886.57	3.35	2009.80	1590.20	166	39.70	418.00	3725	8
55	M	2498.75	4.38	2268.90	1331.10	90	40.18	413.00	4405	2
73	H	2964.74	4.20	2042.20	1557.80	75	52.61	483.00	4598	3
35	L	3472.97	3.91	1683.50	1916.50	90	58.48	342.00	5940	4
37	L	2604.16	3.30	1699.90	1900.10	110	54.75	491.00	5037	5
57	M	3130.54	3.20	1419.00	2181.00	204	47.36	482.00	5797	6
75	H	3095.04	3.75	1704.10	1895.90	107	45.44	435.00	5283	7
15	C	2333.46	3.60	1992.20	1607.80	126	38.40	360.00	4411	8
17	C	2691.35	4.28	1990.80	1609.20	122	53.60	384.00	4626	2
39	L	3828.72	4.35	1631.60	1968.40	88	47.57	716.00	5729	3
77	H	3784.40	4.36	1637.40	1962.60	156	44.18	386.00	7019	4
79	H	3346.87	3.69	1567.40	2032.60	186	49.82	526.00	6134	5
19	C	2261.84	3.74	1822.40	1777.60	83	38.05	351.00	3875	6
59	M	2454.77	3.25	1862.60	1737.40	99	44.46	454.00	4716	8
		cm	cm/sec	sec of 3600	sec of 3600	bb		bb		

Female Rat Motor Activity Data following Exposure to SB-8

Subject ID	Treat	Actual Distance cm	Actual Speed cm/sec	Actual Resting Time_Secs	Activity Time_Secs	Total Rears	% in Center	Fine Total	Ambu Total	Chamber
2	C	5570.83	4.72	1180.40	2419.60	125	53.05	541.00	8060	1
22	L	2445.31	3.96	1610.40	1989.60	92	42.25	352.00	5013	2
42	M	3068.93	4.01	2019.40	1580.60	156	51.70	413.00	6196	3
4	C	1179.07	2.94	1981.50	1618.50	55	30.70	324.00	2504	5
24	L	1802.88	3.38	1487.00	2113.00	98	37.57	316.00	3736	6
44	M	1698.23	3.24	2234.60	1365.40	94	31.77	477.00	3549	7
62	H	1488.03	2.86	1786.10	1813.90	125	36.62	361.00	3459	8
26	L	4450.83	4.22	1232.90	2367.10	103	40.43	503.00	7209	1
46	M	2979.75	3.63	1599.70	2000.30	122	42.45	468.00	5594	2
64	H	3085.21	4.03	1765.80	1834.20	147	53.20	509.00	5818	3
28	L	2196.74	3.05	1716.60	1883.40	160	32.86	437.00	4576	5
48	M	2341.33	3.61	2099.10	1500.90	124	44.07	481.00	4739	6
66	H	2661.77	3.25	1743.30	1856.70	143	37.68	496.00	5566	7
6	C	1941.05	2.82	1872.30	1727.70	120	42.58	447.00	4209	8
68	H	4370.96	4.64	1575.90	2024.10	65	49.69	605.00	5745	1
8	C	3309.40	3.76	1645.60	1954.40	100	56.30	475.00	6468	2
30	L	3149.42	3.84	1650.40	1949.60	169	50.94	483.00	5858	3
70	H	2747.29	3.09	1605.30	1994.70	199	38.78	486.00	5616	5
10	C	1796.93	3.57	1666.00	1934.00	70	40.45	305.00	3579	6
50	M	1500.63	2.76	1960.90	1639.10	85	29.74	380.00	3368	8
12	C	4791.08	4.28	1147.90	2452.10	162	53.15	426.00	7871	1
32	L	2964.43	4.15	1169.70	2430.30	102	54.60	369.00	5875	2
52	M	3004.89	4.28	2014.30	1585.70	85	57.53	798.00	4890	3
14	C	2389.71	3.21	1952.30	1647.70	118	30.33	441.00	4800	5
34	L	1774.17	3.38	2077.60	1522.40	89	41.96	398.00	3616	6
54	M	1507.46	3.66	2077.00	1523.00	75	37.07	531.00	3233	7
72	H	2252.82	2.77	1706.90	1893.10	98	40.68	500.00	4924	8
56	M	2919.94	4.01	1992.70	1607.30	96	40.19	466.00	6023	2
74	H	2432.73	3.46	2041.30	1558.70	80	45.99	427.00	4729	3
36	L	1433.79	3.62	2166.60	1433.40	50	31.26	399.00	2786	4
38	L	2102.93	3.07	1946.60	1653.40	121	30.59	499.00	4219	5
58	M	1700.06	3.39	2177.20	1422.80	95	29.73	430.00	3523	6
144	H	1782.63	3.57	1633.20	1966.80	112	35.71	391.00	3583	7
16	C	1907.32	2.90	1938.40	1661.60	136	38.45	465.00	3941	8
18	C	2466.52	4.02	2124.80	1475.20	52	54.48	360.00	4217	2
40	L	2877.93	3.46	1574.60	2025.40	92	51.10	457.00	5680	3
78	H	3187.19	3.64	1690.20	1909.80	155	42.82	495.00	6548	4
80	H	2847.84	3.20	1485.90	2114.10	209	45.47	506.00	5535	5
20	C	2379.51	3.49	2053.90	1546.10	137	36.61	466.00	4975	6
60	M	2490.39	3.09	1732.60	1867.40	143	27.35	551.00	5168	8
		cm	cm/sec	sec of 3600	sec of 3600	bb		bb		

Male Rat FOB Data following Exposure to SB-8:
Open Field Observations

Animal ID	Group	Time	Arousal	Activity	Ataxia	Gait	Body Position	Unusual Behaviors	Tremor	Severity	Induction	Spasm	Location	Seizures	Clonic Convulsions	Seizure Severity	Palpebral Closure
1	C	800	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
21	L	813	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
41	M	816	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
61	H	820	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
3	C	825	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
23	L	827	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
143	M	831	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
63	H	835	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
5	C	840	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
25	L	843	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
45	M	846	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
65	H	850	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
7	C	855	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
27	L	900	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
47	M	903	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
67	H	906	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
141	C	910	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
29	L	913	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
49	M	919	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
69	H	921	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
11	C	1039	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
31	L	1040	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
51	M	1044	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
71	H	1046	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
13	C	1050	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
33	L	1054	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
53	M	1056	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
73	H	1059	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
15	C	1103	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
35	L	1107	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
55	M	1110	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
75	H	1114	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
17	C	1116	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
37	L	1121	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
57	M	1124	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
77	H	1127	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
19	C	1129	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
39	L	1134	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
59	M	1136	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
79	H	1140	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1

Male Rat FOB Data following Exposure to SB-8: Cage Side Observations

Animal ID	Posture	Tremor	Severity	Induction	Spasm	Location	Seizures	Clonic Convulsions	Seizure Severity	Palpebral Closure	Pupil Reflex
1	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
21	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
41	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
61	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
3	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
23	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
143	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
63	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
5	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
25	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
45	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
65	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
7	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
27	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
47	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
67	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
141	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
29	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
49	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
69	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
11	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
31	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
51	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
71	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
13	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
33	1	0	N/A	N/A	0	N/A	0	N/A	N/A	2	1
53	1	0	N/A	N/A	0	N/A	0	N/A	N/A	3	1
73	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
15	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
35	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
55	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
75	2	0	N/A	N/A	0	N/A	0	N/A	N/A	3	1
17	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
37	1	0	N/A	N/A	0	N/A	0	N/A	N/A	3	1
57	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
77	1	0	N/A	N/A	0	N/A	0	N/A	N/A	2	1
19	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
39	1	0	N/A	N/A	0	N/A	0	N/A	N/A	2	1
59	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
79	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1

Animal ID	Removal	Handling Reactivity	Pilo-erection	Muscle Tone	Lacrimation	Salivation	Fur Appearance	Facial Crust	Skin	Breathing Pattern	Additional Observations
1	1	1	0	1	0	0	1	0	1	1	0
21	1	1	0	1	0	0	1	0	1	1	0
41	1	1	0	1	0	0	1	0	1	1	0
61	1	1	0	1	0	0	1	0	1	1	0
3	1	1	0	1	0	0	1	0	1	1	0
23	1	1	0	1	0	0	1	0	1	1	0
143	1	1	0	1	0	0	1	0	1	1	0
63	1	1	0	1	0	0	1	0	1	1	0
5	1	1	0	1	0	0	1	0	1	1	0
25	1	1	0	1	0	0	1	0	1	1	0
45	1	1	0	1	0	0	1	0	1	1	0
65	1	1	0	1	0	0	1	1	1	1	0
7	1	1	0	1	0	0	1	0	1	1	0
27	1	1	0	1	0	0	1	0	1	1	0
47	1	1	0	1	0	0	1	0	1	1	0
67	1	1	0	1	0	0	1	0	1	1	0
141	1	1	0	1	0	0	1	0	1	1	0
29	1	1	0	1	0	0	1	0	1	1	0
49	1	1	0	1	0	0	1	0	1	1	0
69	1	1	0	1	0	0	1	0	1	1	0
11	1	1	0	1	0	0	1	0	1	1	0
31	1	1	0	1	0	0	1	0	1	1	0
51	1	1	0	1	0	0	1	0	1	1	0
71	1	1	0	1	0	0	1	0	1	1	0
13	1	1	0	1	0	0	1	0	1	1	0
33	1	1	0	1	0	0	1	0	1	1	0
53	1	1	0	1	0	0	1	0	1	1	0
73	1	1	0	1	0	0	1	0	1	1	0
15	1	1	0	1	0	0	1	0	1	1	0
35	1	1	0	1	0	0	1	0	1	1	0
55	1	1	0	1	0	0	1	0	1	1	0
75	1	1	0	1	0	0	1	0	1	1	0
17	1	1	0	1	0	0	1	0	1	1	0
37	1	1	0	1	0	0	1	0	1	1	0
57	1	1	0	1	0	0	1	0	1	1	0
77	1	1	0	1	0	0	1	0	1	1	0
19	1	1	0	1	0	0	1	0	1	1	0
39	1	1	0	1	0	0	1	0	1	1	0
59	1	1	0	1	0	0	1	0	1	1	0
79	1	1	0	1	0	0	1	0	1	1	0

Male Rat FOB Data following Exposure to SB-8: Manipulative Observations

Animal ID	Approach Response	Acoustic Response	Tail Pinch Response	Fecal Boli #	Appearance	Urine Pools	Rears	Grooming	Visual Placing	Surface Righting
1	1	1	1	N/A	0	0	18	4	1	1
21	1	1	1	N/A	0	0	19	2	1	1
41	1	1	1	N/A	0	0	22	5	1	1
61	1	1	1	3	1	1	14	5	1	1
3	1	1	1	N/A	0	0	13	4	1	1
23	1	1	1	N/A	0	0	21	6	1	1
143	1	1	1	N/A	0	0	11	8	1	1
63	1	1	1	N/A	0	0	15	2	1	1
5	1	1	1	N/A	0	0	13	2	1	1
25	1	1	1	N/A	0	0	16	5	1	1
45	1	1	1	N/A	0	0	19	2	1	1
65	1	1	1	N/A	0	0	16	5	1	1
7	1	1	1	N/A	0	0	11	4	1	1
27	1	1	1	N/A	0	0	20	2	1	1
47	1	1	1	N/A	0	0	19	3	1	1
67	1	1	1	N/A	0	0	20	1	1	1
141	1	1	1	N/A	0	0	16	6	1	1
29	1	1	1	N/A	0	0	19	3	1	1
49	1	1	1	3	1	0	12	2	1	1
69	1	1	1	N/A	0	0	20	3	1	1
11	1	1	1	N/A	0	0	20	5	1	1
31	1	1	1	N/A	0	0	19	2	1	1
51	1	1	1	N/A	0	0	16	5	1	1
71	1	1	1	N/A	0	0	22	4	1	1
13	1	1	1	N/A	0	0	15	4	1	1
33	1	1	1	N/A	0	1	17	2	1	1
53	1	1	1	N/A	0	0	23	2	1	1
73	1	1	1	N/A	0	0	13	3	1	1
15	1	1	1	N/A	0	0	18	3	1	1
35	1	1	1	N/A	0	0	16	1	1	1
55	1	1	1	N/A	0	0	14	3	1	1
75	1	1	1	N/A	0	0	16	3	1	1
17	1	1	1	N/A	0	0	16	2	1	1
37	1	1	1	N/A	0	1	14	3	1	1
57	1	1	1	N/A	0	3	0	4	1	1
77	1	1	1	N/A	0	0	19	3	1	1
19	1	1	1	N/A	0	0	8	3	1	1
39	1	1	1	N/A	0	0	16	1	1	1
59	1	1	1	N/A	0	0	19	2	1	1
79	1	1	1	N/A	0	0	18	3	1	1

Animal ID	Fore Avg	Hind Avg	Splay Avg	Comments
1	0.675	0.3535	59	
21	0.445	0.1455	64	
41	0.5625	0.4175	64	
61	0.7925	0.3695	79	
3	0.3875	0.302	56.5	Tail bleeding--perhaps, pinched
23	0.5175	0.4065	115	
143	0.42	0.344	81	
63	0.715	0.3625	58	Seems slow. Vocalized and delayed hindlimb splay because uncooperative
5	0.495	0.422	99	
25	0.53	0.465	67	
45	0.63	0.3675	100	
65	0.5975	0.448	72	
7	0.655	0.517	128	
27	0.6755	0.382	100.5	
47	0.5325	0.4755	83	
67	0.5125	0.295	75.5	
141	0.6375	0.435	57.5	
29	0.53	0.379	112	
49	0.73	0.4685	82.5	
69	0.56	0.3615	64	
11	0.69	0.71	104.5	
31	0.66	0.5485	81	
51	0.7825	0.637	94	
71	0.7775	0.447	89.5	
13	0.5125	0.362	81	
33	0.8025	0.4195	92	Took 3 trials for Forelimb (0.615)
53	0.6	0.4105	74	
73	0.46	0.414	102.5	Hindlimb measurement may be subjected to visual limitations of paint on the paper
15	0.775	0.525	81	
35	0.5775	0.484	72	
55	0.3725	0.358	80	
75	0.655	0.3975	94	
17	0.6375	0.4895	65.5	
37	0.48	0.441	91.5	
57	0.7725	0.4895	63	
77	0.6775	0.448	80.5	
19	0.525	0.4605	99.5	
39	0.625	0.3995	87	
59	0.56	0.411	81	
79	0.5675	0.486	83.5	

Female Rat FOB Data following Exposure to SB-8:
Open Field Observations

Animal ID	Group	Time	Arousal	Activity	Ataxia	Gait	Body Position	Unusual Behaviors	Tremor	Severity	Induction	Spasm	Location	Seizures	Clonic Convulsions	Seizure Severity	Palpebral Closure
2	C	1000	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
22	L	1005	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
42	M	1007	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
62	H	1012	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
4	C	1016	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
24	L	1020	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
44	M	1023	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
64	H	1028	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
6	C	1031	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
26	L	1035	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
46	M	1040	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
66	H	1045	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
8	C	1049	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
28	L	1054	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
48	M	1057	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
68	H	1102	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
10	C	1107	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
30	L	1114	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
50	M	1118	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
70	H	1123	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
12	C	830	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
32	L	833	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
52	M	835	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
72	H	840	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
14	C	844	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
34	L	846	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
54	M	850	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
74	H	855	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
16	C	858	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
36	L	902	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
56	M	906	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
144	H	909	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
18	C	914	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
38	L	916	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
58	M	921	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
78	H	925	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
20	C	927	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
40	L	930	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
60	M	935	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1
80	H	940	1	1	0	1	1	0	0	N/A	N/A	0	N/A	0	N/A	N/A	1

Female Rat FOB Data following Exposure to SB-8: Cage Side Observations

Animal ID	Posture	Tremor	Severity	Induction	Spasm	Location	Seizures	Clonic Convulsions	Seizure Severity	Palpebral Closure	Pupil Reflex
2	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
22	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
42	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
62	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
4	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
24	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
44	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
64	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
6	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
26	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
46	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
66	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
8	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
28	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
48	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
68	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
10	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
30	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
50	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
70	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
12	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
32	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
52	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
72	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
14	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
34	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
54	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
74	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
16	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
36	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
56	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
144	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
18	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
38	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
58	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
78	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
20	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
40	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1
60	1	0	N/A	N/A	0	N/A	0	N/A	N/A	2	1
80	1	0	N/A	N/A	0	N/A	0	N/A	N/A	1	1

Animal ID	Removal	Handling Reactivity	Pilo-erection	Muscle Tone	Lacrimation	Salivation	Fur Appearance	Facial Crust	Skin	Breathing Pattern	Additional Observations
2	1	1	0	1	0	0	1	0	1	1	0
22	1	1	0	1	0	0	1	0	1	1	0
42	1	1	0	1	0	0	3	0	1	1	0
62	1	1	0	1	0	0	3	0	1	1	0
4	1	1	0	1	0	0	1	0	1	1	0
24	1	1	0	1	0	0	1	0	1	1	0
44	1	1	0	1	0	0	1	0	1	1	0
64	1	1	0	1	0	0	1	1	1	1	0
6	1	1	0	1	0	0	1	0	1	1	0
26	1	1	0	1	0	0	1	0	1	1	0
46	1	1	0	1	0	0	1	0	1	1	0
66	1	1	0	1	0	0	3	0	1	1	0
8	1	1	0	1	0	0	1	0	1	1	0
28	1	1	0	1	0	0	1	0	1	1	0
48	1	1	0	1	0	0	1	0	1	1	0
68	1	1	0	1	0	0	3	0	1	1	0
10	1	1	0	1	0	0	1	0	1	1	0
30	1	1	0	1	0	0	1	0	1	1	0
50	1	1	0	1	0	0	3	0	1	1	0
70	1	1	0	1	0	0	3	0	1	1	0
12	1	1	0	1	0	0	1	0	1	1	0
32	1	1	0	1	0	0	1	0	1	1	0
52	1	1	0	1	0	0	3	0	1	1	0
72	1	1	0	1	0	0	3	0	1	1	0
14	1	1	0	1	0	0	1	0	1	1	0
34	1	1	0	1	0	0	1	0	1	1	0
54	1	1	0	1	0	0	1	0	1	1	0
74	1	1	0	1	0	0	3	0	1	1	0
16	1	1	0	1	0	0	3	0	1	1	0
36	1	1	0	1	0	0	1	0	1	1	0
56	1	1	0	1	0	0	1	0	1	1	0
144	1	1	0	1	0	0	1	0	1	1	0
18	1	1	0	1	0	0	1	0	1	1	0
38	1	1	0	1	0	0	1	0	1	1	0
58	1	1	0	1	0	0	3	0	1	1	0
78	1	1	0	1	0	0	1	0	1	1	0
20	1	1	0	1	0	0	1	0	1	1	0
40	1	1	0	1	0	0	1	0	1	1	0
60	1	1	0	1	0	0	1	0	1	1	0
80	1	1	0	1	0	0	3	0	1	1	0

Female Rat FOB Data following Exposure to SB-8: Manipulative Observations

Animal ID	Approach Response	Acoustic Response	Tail Pinch Response	Fecal Boli #	Appearance	Urine Pools	Rears	Grooming	Visual Placing	Surface Righting
2	1	1	1	N/A	0	0	19	2	1	1
22	1	1	1	N/A	0	0	21	7	1	1
42	1	1	1	N/A	0	0	19	6	1	1
62	1	1	1	N/A	0	0	20	1	1	1
4	1	1	1	N/A	0	0	19	3	1	1
24	1	1	1	N/A	0	0	19	2	1	1
44	1	1	1	N/A	0	0	18	3	1	1
64	1	1	1	N/A	0	0	23	3	1	1
6	1	1	1	N/A	0	0	14	1	1	1
26	1	1	1	N/A	0	0	22	1	1	1
46	1	1	1	N/A	0	0	20	4	1	1
66	1	1	1	N/A	0	0	20	5	1	1
8	1	1	1	N/A	0	0	18	4	1	1
28	1	1	1	N/A	0	0	22	3	1	1
48	1	1	1	N/A	0	0	20	1	1	1
68	1	1	1	N/A	0	0	12	2	1	1
10	1	1	1	N/A	0	0	16	6	1	1
30	1	1	1	N/A	0	0	19	2	1	1
50	1	1	1	N/A	0	0	18	4	1	1
70	1	1	1	N/A	0	0	14	0	1	1
12	1	1	1	N/A	0	0	18	4	1	1
32	1	1	1	N/A	0	0	7	7	1	1
52	1	1	1	N/A	0	0	26	4	1	1
72	1	1	1	N/A	0	0	22	5	1	1
14	1	1	1	N/A	0	0	18	3	1	1
34	1	1	1	N/A	0	0	13	7	1	1
54	1	1	1	N/A	0	0	12	9	1	1
74	1	1	1	N/A	0	0	18	3	1	1
16	1	1	1	N/A	0	0	15	2	1	1
36	1	1	1	N/A	0	0	11	5	1	1
56	1	1	1	N/A	0	0	15	4	1	1
144	1	1	1	N/A	0	0	18	4	1	1
18	1	1	1	N/A	0	0	12	5	1	1
38	1	1	1	N/A	0	0	12	3	1	1
58	1	1	1	N/A	0	0	18	2	1	1
78	1	1	1	N/A	0	0	25	5	1	1
20	1	1	1	N/A	0	0	21	3	1	1
40	1	1	1	N/A	0	0	18	3	1	1
60	1	1	1	N/A	0	0	12	4	1	1
80	1	1	1	N/A	0	0	18	3	1	1

Animal ID	Fore Avg	Hind Avg	Splay Avg	Comments
2	0.617	0.3935	99	
22	0.39	0.3255	71.5	
42	0.57	0.4535	68.5	
62	0.5075	0.34	64.5	
4	0.3775	0.3335	76.5	
24	0.5675	0.4045	70	
44	0.4275	0.331	64	
64	0.38	0.34	66.5	
6	0.3175	0.45	64	
26	0.4	0.2425	94.5	
46	0.405	0.396	74.5	
66	0.59	0.3535	63.5	
8	0.5125	0.3895	72	
28	0.395	0.2935	72	
48	0.3375	0.4135	54.5	
68	0.4425	0.288	64.5	
10	0.4275	0.3775	63	
30	0.435	0.434	73	
50	0.5775	0.39	55	
70	0.5625	0.3665	73	
12	0.395	0.258	39	
32	0.31	0.471	62	
52	0.57	0.404	62.5	
72	0.5325	0.2865	79.5	
14	0.5025	0.312	64.5	
34	0.415	0.287	81.5	
54	0.465	0.313	55	
74	0.3475	0.269	58.5	
16	0.44	0.2515	57	
36	0.4575	0.335	71.5	
56	0.4825	0.354	78.5	
144	0.49	0.3625	69.5	
18	0.54	0.3155	48.5	
38	0.465	0.338	47.5	
58	0.485	0.302	93.5	
78	0.465	0.326	58	
20	0.42	0.334	84.5	
40	0.525	0.432	64.5	
60	0.445	0.438	85	
80	0.475	0.4715	46	

APPENDIX D. VAGINAL CYTOLOGY TO IDENTIFY ESTROUS CYCLICITY

Animal ID	Exposure Group	Day 1 27-Nov-12	Day 2 28-Nov-12	Day 3 29-Nov-12	Day 4 30-Nov-12	Day 5 1-Dec-12	Day 6 2-Dec-12	Day 7 3-Dec-12
2	**C**	P	E	E	M	P	P	E
4	**C**	P	E	E	M	P	P	D
6	**C**	P/E	P/E	E	E	E	P	P
8	**C**	E	M	D/P	P	P	E	D
10	**C**	P	P	P/E	P/E	M	P	P
12	**C**	E	E	P/E	P/E	E	E	M
14	**C**	P	P/E	E	E	E	M	P
16	**C**	P	E	P	P	P/E	P/E	E
18	**C**	P/E	E	E	P/E	M	D/P	P/E
20	**C**	P/E	E	P	P/E	D	D/P	P/E
22	**L**	E	E	E	M	P/E	E	D
24	**L**	P	M	E	M	E	D	E
26	**L**	P/E	E	E	E	M	D	D
28	**L**	P/E	E	D/P	E	D	D/P	P/E
30	**L**	P/E	P/E	M	D/P	E	M	D
32	**L**	P/E	E	D/P	E	P	D/P	E
34	**L**	E	D	P/E	E	E	M	D
36	**L**	M	P	E	P/E	P/E	M	P
38	**L**	E	P	E	E	E	P	M
40	**L**	M	E	P/E	E	P	P/E	M
42	**M**	P/E	E	E	E	D	P/E	E
44	**M**	P/E	M	E	E	P	P	M
46	**M**	P/E	E	E	E	P/E	P	M
48	**M**	D/P	E	E	E	P	P/E	D
50	**M**	P/E	P/E	M	P/E	E	P	E
52	**M**	P/E	P/E	M	P	E	M	P
54	**M**	E	E	P	P/E	P/E	E	M
56	**M**	P/E	E	P	P/E	M	P	E
58	**M**	E	D	D/P	E	P/E	E	M
60	**M**	P/E	E	E	E	P/E	M	M
62	**H**	M	D	E	E	D/P	E	E
64	**H**	P	P/E	D	P/E	E	D	D/P
66	**H**	P/E	P/E	E	E	E	D/P	P
68	**H**	M	E	E	E	P	P/E	E
70	**H**	P/E	E	D	P	M	E	E
72	**H**	E	P/E	P/E	P/E	P/E	E	D/P
74	**H**	P/E	E	M	P/E	M	P/E	E
144	**H**	P/E	P/E	E	M	E	D/P	P
78	**H**	P	E	M	D/P	E	P	E
80	**H**	D	P/E	E	P/E	M	D	P/E

Exposure Group Units: mg/m3 SB-8

D = diestrus; D/P = diestrus/proestrus transititon; E = estrus;

M = metestrus; P/E = proestrus/estrus transition; P = proestrus

Abnormal cycle defined as 3 or more days of estrus or 4 or more days of diestrus

Normal Cycle: proestrus = 1 day, estrus = 1-2 days, metestrus = first part of diestrus, diestrus = 2-3 days

APPENDIX E. SPERM PARAMETERS

Sperm Count following Exposure to SB-8

Animal ID	Exposure Group	Teste Tissue Weight	Total Cells Counted	Sperm Concentration
Unit:	mg/m3	g	#	sperm/g
5	C	1.577	874	1514.9
7	C	1.566	923	1599.9
141	C	1.606	1020	1768
3	C	1.436	939	1627.6
1	C	1.487	750	1300
11	C	1.6	633	1097.2
17	C	1.537	865	1499.3
15	C	1.546	790	1369.3
13	C	1.643	610	1057.3
19	C	1.444	717	1242.8
21	L	1.416	989	1714.3
29	L	1.58	937	1624.2
23	L	1.361	763	1322.5
25	L	1.564	855	1482
27	L	1.535	646	1119.7
39	L	1.413	715	1239.3
31	L	1.534	893	1547.9
33	L	1.627	770	1334.7
35	L	1.47	798	1383.2
37	L	1.41	642	1112.8
41	M	1.494	982	1702.2
47	M	1.513	916	1587.8
143	M	1.523	1247	2161.5
45	M	1.552	925	1603.4
49	M	1.54	929	1610.3
51	M	1.604	874	1514.9
59	M	1.504	616	1067.7
53	M	1.434	671	1163.1
57	M	1.476	765	1326
55	M	1.561	850	1473.3
65	H	1.584	965	1672.7
63	H	1.501	849	1471.6
61	H	1.612	834	1445.6
69	H	1.527	910	1577.3
67	H	1.372	981	1700.4
77	H	1.536	975	1690
75	H	1.47	618	1071.2
73	H	1.528	1030	1785.4
79	H	1.663	695	1204.7
71	H	1.616	1085	1880.7

Sperm Motility and Morphology following Exposure to SB-8

Exposure Group	Animal #	Total Cells Count R Epididymis #	Total Motile Cells #	Total Progressively Motile Cells #	Conc Total Cells M/mL	Conc Motile Cells M/mL	Conc Progressively Motile Cells M/mL	Path Velocity um/s	Progressive Velocity um/s	Track Speed um/s	Lateral Amplitude um
Control	1	2283	1852	647	241.1	195.6	68.3	164.4	116.4	296.1	13.3
Control	3	4189	3270	1141	442.4	345.3	120.5	199.2	139.9	340.3	15.7
Control	5	3967	3128	972	419	330.3	102.7	203.1	141.3	349.8	16
Control	7	4006	3407	1209	423.1	359.8	127.7	218.3	154.4	380.1	16.8
Control	141	4459	3800	1231	470.9	401.3	130	213.2	147.5	365	16.7
Control	11	4726	3769	1242	499.1	398	131.2	212.7	146.7	342	14.8
Control	13	4097	3588	1207	432.7	378.9	127.5	208.9	147.3	358.9	15.8
Control	15	4805	3736	1352	507.5	394.6	142.8	199.2	143.3	333.6	16.2
Control	17	3733	2772	1024	394.2	292.7	108.1	214.6	153.8	380	17.2
Control	19	3164	2369	894	334.1	250.2	94.4	202.2	145.6	377.1	17.2
Low	21	3929	3245	1136	414.9	342.7	120	213.2	150.8	380.1	16.9
Low	23	4264	3696	1304	450.3	390.3	137.7	218.9	155.3	370.5	16.5
Low	25	2359	1790	637	249.1	189	67.3	189	133.5	351.1	15.8
Low	27	2249	1728	620	237.5	182.5	65.5	188.1	132	338.9	15.3
Low	29	4164	3700	1227	439.8	390.8	129.6	216.7	152.2	379.1	16.8
Low	31	3038	2467	899	320.8	260.5	94.9	197.2	140.2	347.2	15.6
Low	33	4227	3780	1193	446.4	399.2	126	224.6	155.3	384.8	16.6
Low	35	4529	3658	1186	478.3	386.3	125.3	206.8	143.7	362.5	17.1
Low	37	3434	2856	994	362.7	301.6	105	197	140	341	15.3
Low	39	3599	3191	1193	380.1	337	126	208.7	147.9	365.2	15.9
Medium	41	3011	2333	838	318	246.4	88.5	180.5	129.9	310.5	14.5
Medium	143	3067	2335	812	323.9	246.6	85.8	189	133.8	327.6	14.5
Medium	45	1987	1789	560	419.7	377.9	118.3	213.5	149.5	365.7	16.8
Medium	47	2952	2397	869	311.8	253.1	91.8	202.2	142.9	367.8	15.8
Medium	49	4134	3417	1040	436.6	360.9	109.8	206.3	141.8	361.1	16.2
Medium	51	3266	2712	937	344.9	286.4	99	185.8	131.5	321.7	14.7
Medium	53	4394	3316	1275	464	350.2	134.7	209	151.3	355.2	16.6
Medium	55	4203	3708	1318	443.9	391.6	139.2	225.9	161.3	380.6	16.6
Medium	57	4356	3553	1162	460	375.2	122.7	218.5	153.1	380.3	17.1
Medium	59	3721	2916	1086	393	308	114.7	189.8	137.6	321.9	15.6
High	61	2817	2077	682	297.5	219.4	72	185.4	130.1	324.5	14.8
High	63	2372	1680	598	250.5	177.4	63.2	172.8	122.9	300.6	14.1
High	65	4245	3531	1209	448.3	372.9	127.7	218.5	151.3	386.4	17
High	67	2683	2034	677	283.3	214.8	71.5	175.9	124.4	311.4	14.5
High	69	3607	2689	921	380.9	284	97.3	183.7	130.1	314.4	15
High	71	3940	3062	973	416.1	323.4	102.8	209.6	143.3	376.7	16.6
High	73	1894	1411	496	400	298	104.8	206.6	144.4	368.9	15.8
High	75	4107	3484	1259	433.7	367.9	133	242.1	170.3	436.5	18.6
High	77	4185	3680	1331	442	388.6	140.6	229.2	163.1	387.5	16.6
High	79	1868	1717	606	394.6	362.7	128	210.6	147.7	375.2	16.2

Animal #	Beat Frequency	Straight-ness	Linearity	Elongation	Area	Percent Rapid	Percent Medium	Percent Slow	Percent Static	Testis Wt	Total L Testis Cells Counted	Testis Homogenate Added
	Hz	%	%	%	um^2	%	%	%	%	g	#	mL
1	17	70	41	25	388.8	80	1	10	9	1.487	750	4.46
3	16.5	69	42	31	451.6	77	1	15	7	1.436	939	4.31
5	16.4	67	41	31	469.6	78	1	11	10	1.577	874	4.73
7	16.5	69	41	31	573.4	84	1	11	4	1.566	923	4.7
141	16.7	67	41	33	519.3	84	1	9	6	1.606	1020	4.82
11	15	66	44	36	603.1	78	1	13	7	1.6	633	4.8
13	15.7	69	42	32	701.4	87	1	7	5	1.643	610	4.93
15	16.9	70	44	32	568.3	76	2	14	8	1.546	790	4.64
17	18.1	70	41	31	619.6	73	2	16	9	1.537	865	4.61
19	19.9	71	39	28	512.1	74	1	15	10	1.444	717	4.33
21	17.6	69	40	31	563.2	82	1	11	6	1.416	989	4.25
23	15.7	69	43	32	564	86	1	9	4	1.361	763	4.08
25	18.7	70	40	26	443.4	75	1	12	12	1.564	855	4.69
27	17.9	70	40	26	446.2	76	1	14	10	1.535	646	4.61
29	16.6	68	41	32	632.4	88	1	8	3	1.58	937	4.74
31	16.8	70	41	27	573.5	80	1	11	8	1.534	893	4.602
33	15.4	67	41	34	821.2	89	0	6	5	1.627	770	4.88
35	17.5	68	40	32	577.8	80	1	12	7	1.47	798	4.41
37	16.2	70	42	29	584	82	1	11	6	1.41	642	4.23
39	16	70	42	30	708.6	88	0	8	4	1.413	715	4.24
41	16.5	71	43	28	411	76	1	12	11	1.494	982	4.48
143	16.6	70	42	29	423	75	1	13	11	1.523	1247	4.57
45	15.5	68	41	32	572	89	1	7	3	1.552	925	4.08
47	18.1	69	40	28	525.8	80	1	11	8	1.513	916	4.574
49	16.9	67	40	32	493.5	82	1	9	8	1.54	929	4.62
51	16.7	70	42	30	532	82	1	10	7	1.604	874	4.81
53	16.6	71	44	32	592.2	74	1	17	8	1.434	671	4.3
55	14.6	69	43	33	862.4	88	0	6	6	1.561	850	4.68
57	17	68	41	32	687.8	81	1	11	8	1.476	765	4.43
59	16.1	71	44	30	556.1	77	1	13	8	1.504	616	4.51
61	16.3	69	41	26	426.5	72	1	14	12	1.612	834	4.84
63	16.5	71	43	25	372.8	70	1	13	16	1.501	849	4.5
65	18	68	40	32	626.6	82	1	11	6	1.584	965	4.75
67	16.6	70	41	27	404.2	75	1	13	11	1.372	981	4.12
69	16.8	69	43	29	394	73	2	17	8	1.527	910	4.58
71	19	66	39	27	350.7	77	1	13	9	1.616	1085	4.85
73	18	69	41	29	552.5	73	1	16	10	1.528	1030	4.58
75	17.5	69	40	33	810.4	84	1	9	6	1.47	618	4.41
77	15.2	69	43	33	798.3	87	1	7	5	1.536	975	4.61
79	16.3	69	40	31	695.4	92	0	5	3	1.663	695	4.99

Animal #	Machine Reported L Testis Total Conc	Calculated Testis Total Conc	L Testis Sperm	Total Cells Assessed for Morphology	Total Cells with Normal Morphology	Cells with Normal Morphology	Cells with Abnormal Morphology	Total Abnormal Cells	Total Abnormal Heads
	M/mL	M/mL	#/g	#	#	%	%	#	#
1	1300	33450	504.3712	161	107	66.5	33.5	54	2
3	1627.6	40470.9	653.8997	187	121	64.7	35.3	66	4
5	1514.9	41340.2	554.2169	230	149	64.8	35.2	81	0
7	1599.9	43381	589.3997	132	105	79.5	20.5	27	2
141	1768	49164	635.1183	149	98	65.8	34.2	51	0
11	1097.2	30384	395.625	185	119	64.3	35.7	66	2
13	1057.3	30073	371.2721	163	90	55.2	44.8	73	0
15	1369.3	36656	510.9961	149	102	68.5	31.5	47	1
17	1499.3	39876.5	562.7846	219	152	69.4	30.6	67	1
19	1242.8	31046.1	496.5374	228	153	67.1	32.9	75	1
21	1714.3	42032.5	698.4463	237	150	63.3	36.7	87	2
23	1322.5	31130.4	560.6172	130	77	59.2	40.8	53	0
25	1482	40099.5	546.6752	204	146	71.6	28.4	58	3
27	1119.7	29780.6	420.8469	205	137	66.8	33.2	68	2
29	1624.2	44413.8	593.038	189	126	66.7	33.3	63	2
31	1547.9	41095.86	582.1382	226	157	69.5	30.5	69	0
33	1334.7	37576	473.2637	212	137	64.6	35.4	75	3
35	1383.2	35191.8	542.8571	109	75	68.8	31.2	34	1
37	1112.8	27156.6	455.3191	203	134	66	34	69	0
39	1239.3	30316	506.0156	155	101	65.2	34.8	54	2
41	1702.2	43993.6	657.2959	163	111	68.1	31.9	52	2
143	2161.5	56987.9	818.7787	153	99	64.7	35.3	54	4
45	1603.4	37740	596.0052	207	146	70.5	29.5	61	2
47	1587.8	41897.84	605.4197	278	182	65.5	34.5	96	4
49	1610.3	42919.8	603.2468	152	98	64.5	35.5	54	1
51	1514.9	42039.4	544.8878	122	81	66.4	33.6	41	1
53	1163.1	28853	467.9219	145	88	60.7	39.3	57	3
55	1473.3	39780	544.5227	177	106	59.9	40.1	71	2
57	1326	33889.5	518.2927	120	77	64.2	35.8	43	2
59	1067.7	27781.6	409.5745	230	160	69.6	30.4	70	3
61	1445.6	40365.6	517.3697	174	122	70.1	29.9	52	6
63	1471.6	38205	565.6229	224	158	70.5	29.5	66	5
65	1672.7	45837.5	609.2172	150	103	68.7	31.3	47	0
67	1700.4	40417.2	715.0146	191	138	72.3	27.7	53	3
69	1577.3	41678	595.9398	295	197	66.8	33.2	98	1
71	1880.7	52622.5	671.4109	135	83	61.5	38.5	52	4
73	1785.4	47174	674.0838	165	102	61.8	38.2	63	1
75	1071.2	27253.8	420.4082	233	170	73	27	63	0
77	1690	44947.5	634.7656	236	145	61.4	38.6	91	1
79	1204.7	34680.5	417.9194	126	89	70.6	29.4	37	1

Animal #	Abnormal Heads	Total Abnormal Tails	Abnormal Tails
	%	#	%
1	4	52	96
3	6	62	94
5	0	81	100
7	7	25	93
141	0	51	100
11	3	64	97
13	0	73	100
15	2	46	98
17	1	66	99
19	1	74	99
21	2	85	98
23	0	53	100
25	5	55	95
27	3	66	97
29	3	61	97
31	0	69	100
33	4	72	96
35	3	33	97
37	0	69	100
39	4	52	96
41	4	50	96
143	7	50	93
45	3	59	97
47	4	92	96
49	2	53	98
51	2	40	98
53	5	54	95
55	3	69	97
57	5	41	95
59	4	67	96
61	12	46	88
63	8	61	92
65	0	47	100
67	6	50	94
69	1	97	99
71	8	48	92
73	2	62	98
75	0	63	100
77	1	90	99
79	3	36	97

APPENDIX F. GROSS PATHOLOGY AND ORGAN WEIGHTS

Gross Pathology and Necropsy Notes following Exposure to SB-8

Animal #	Dose Group	Sex	Necropsy Notes
001	C	M	2 part lobe of liver scored; lung perfusion 1 lobe
002	C	F	1 partial SST blood tube
003	C	M	Lung perfusion - large lobe nicked
004	C	F	1 SST tube; Aorta into jar with lungs; 1 ovary cut in half from dissection
005	C	M	Only 1 adrenal (left); one adrenal gland missing
006	C	F	SST - 1 and a little in 2nd vial
007	C	M	Clotting sample reading error; lung perfusion only 1 lobe
008	C	F	Uterus filled with fluid
141	C	M	
010	C	F	Only 1 lung lobe perfused
011	C	M	
012	C	F	Urinary bladder with pluck
013	C	M	
014	C	F	Right adrenal missing
015	C	M	No pituitary gland - during decap part of cerebellum detached (in cassette); pituitary gone
016	C	F	Urinary bladder with pluck
017	C	M	Urinary bladder with pluck
018	C	F	
019	C	M	
020	C	F	SST only 1 tube; Uterus filled with fluid
021	L	M	EDTA 1 tube; SST zero collected
022	L	F	
023	L	M	Right seminal vesicle is smaller and redder than left which appears normal; Jar 1 from 1/15/2013 --> spleen floating on top of fur, shook jar to sink (on 1/16/2013)
024	L	F	
025	L	M	Lung perfusion - minimal (nicked?)
026	L	F	Spinal column fell on floor
027	L	M	Left epididymis might not be complete; lung perfusion only 1 lobe
028	L	F	
029	L	M	Forebrain slightly nicked
030	L	F	
031	L	M	
032	L	F	
033	L	M	
034	L	F	Urinary bladder with pluck
035	L	M	
036	L	F	Lung perfusion - all but one lobe were perfused; uterus with fluid (nicked on one side)
037	L	M	
038	L	F	Longitudinal cut for right kidney, transverse cut for left kidney
039	L	M	
040	L	F	Lung perfusion only 1 lobe
041	M	M	Heart weighed with aorta
042	M	F	SST 1 tube
143	M	M	
044	M	F	
045	M	M	
046	M	F	
047	M	M	1 EDTA clotted - not enough blood
048	M	F	
049	M	M	
050	M	F	
051	M	M	
052	M	F	Right ovary found with kidneys
053	M	M	
054	M	F	
055	M	M	
056	M	F	
057	M	M	
058	M	F	
059	M	M	
060	M	F	
061	H	M	
062	H	F	
063	H	M	Lung perfusion only 1 lobe inflated
064	H	F	Liver - fragment slice of liver detached
065	H	M	
066	H	F	
067	H	M	
068	H	F	No weight on liver. Put into formalin before being weighed
069	H	M	1 EDTA tube may be clotted. No clotting time recorded
070	H	F	
071	H	M	
072	H	F	Uterus filled with fluid, both ovaries appeared half size. Once ovaries removed from uterus, appeared normal. Uterus size made ovaries look smaller than normal.
073	H	M	
074	H	F	Fluid in uterus
075	H	M	Extra nodule on lobe of liver
144	H	F	
077	H	M	EDTA 1 tube only
078	H	F	
079	H	M	
080	H	F	Urinary bladder with pluck

Organ Weights and Percent Body Weight for Male Control Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Right Epididymus (g)	Right Testicle (g)	Left Epididymus (g)	Left Testicle (g)
001	295.87	0.57	0.85	0.19	1.91	1.01	0.89	0.04	8.71	0.22	1.49	0.55	1.55
003	274.39	0.64	0.68	0.26	1.76	0.89	0.88	0.05	7.88	0.22	1.44	0.42	1.39
005	300.02	0.60	0.82	0.25	1.91	0.96	1.02	0.03	9.82	0.24	1.58	0.47	1.58
007	304.42	0.65	0.79	0.18	1.92	0.94	1.03	0.03	8.89	0.24	1.57	0.46	1.59
141	317.20	0.67	0.92	0.22	1.82	1.00	1.04	0.05	8.98	0.23	1.61	0.47	1.68
011	320.15	0.57	0.96	0.11	1.89	1.02	0.95	0.06	9.44	0.26	1.60	0.49	1.58
013	330.70	0.67	0.93	0.24	1.94	1.05	1.02	0.04	10.67	0.25	1.64	0.47	1.58
015	322.63	0.67	0.96	0.20	1.90	1.08	1.06	0.03	10.83	0.25	1.55	0.54	1.59
017	297.17	0.58	0.89	0.17	1.95	0.99	1.00	0.06	9.17	0.24	1.54	0.52	1.58
019	306.14	0.63	0.84	0.21	1.86	1.02	1.01	0.04	9.44	0.24	1.44	0.48	1.54
Mean	**306.87**	**0.63**	**0.86**	**0.20**	**1.89**	**1.00**	**0.99**	**0.04**	**9.38**	**0.24**	**1.54**	**0.49**	**1.57**
SD	**16.41**	**0.04**	**0.09**	**0.04**	**0.06**	**0.05**	**0.06**	**0.01**	**0.89**	**0.01**	**0.07**	**0.04**	**0.07**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Right Epididymus	Right Testicle	Left Epididymus	Left Testicle
001	295.87	0.19%	0.29%	0.06%	0.65%	0.34%	0.30%	0.01%	2.94%	0.07%	0.50%	0.19%	0.52%
003	274.39	0.23%	0.25%	0.09%	0.64%	0.32%	0.32%	0.02%	2.87%	0.08%	0.52%	0.15%	0.51%
005	300.02	0.20%	0.27%	0.08%	0.64%	0.32%	0.34%	0.01%	3.27%	0.08%	0.53%	0.16%	0.53%
007	304.42	0.21%	0.26%	0.06%	0.63%	0.31%	0.34%	0.01%	2.92%	0.08%	0.51%	0.15%	0.52%
141	317.20	0.21%	0.29%	0.07%	0.57%	0.32%	0.33%	0.02%	2.83%	0.07%	0.51%	0.15%	0.53%
011	320.15	0.18%	0.30%	0.03%	0.59%	0.32%	0.30%	0.02%	2.95%	0.08%	0.50%	0.15%	0.49%
013	330.70	0.20%	0.28%	0.07%	0.59%	0.32%	0.31%	0.01%	3.23%	0.07%	0.50%	0.14%	0.48%
015	322.63	0.21%	0.30%	0.06%	0.59%	0.33%	0.33%	0.01%	3.36%	0.08%	0.48%	0.17%	0.49%
017	297.17	0.20%	0.30%	0.06%	0.66%	0.33%	0.34%	0.02%	3.09%	0.08%	0.52%	0.17%	0.53%
019	306.14	0.21%	0.27%	0.07%	0.61%	0.33%	0.33%	0.01%	3.08%	0.08%	0.47%	0.16%	0.50%
Mean	**306.87**	**0.20%**	**0.28%**	**0.07%**	**0.62%**	**0.32%**	**0.32%**	**0.01%**	**3.05%**	**0.08%**	**0.50%**	**0.16%**	**0.51%**
SD	**16.41**	**0.01%**	**0.02%**	**0.02%**	**0.03%**	**0.01%**	**0.02%**	**0.00%**	**0.18%**	**0.00%**	**0.02%**	**0.01%**	**0.02%**

Organ Weights and Percent Body Weight for Female Control Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Uterus and Ovaries (g)	Uterus (g)	Ovaries (g)
002	190.19	0.44	0.57	0.19	1.72	0.55	0.58	0.05	4.79	0.62	0.51	0.11
004	163.25	0.41	0.49	0.18	1.74	0.55	0.59	0.05	4.30	0.60	0.48	0.12
006	182.67	0.48	0.55	0.23	1.83	0.67	0.74	0.07	5.12	0.66	0.58	0.08
008	189.82	0.57	0.59	0.20	1.73	0.63	0.64	0.04	5.11	1.16	1.08	0.08
010	177.40	0.47	0.56	0.20	1.81	0.62	0.62	0.07	4.59	0.83	0.74	0.09
012	177.87	0.48	0.55	0.18	1.73	0.59	0.58	0.07	4.65	0.60	0.48	0.12
014	168.13	0.42	0.52	0.14	1.70	0.57	0.55	0.01	4.60	0.53	0.42	0.11
016	180.90	0.46	0.53	0.18	1.82	0.59	0.62	0.03	5.00	0.65	0.55	0.10
018	169.14	0.49	0.51	0.25	1.82	0.59	0.58	0.05	4.25	0.48	0.39	0.09
020	168.97	0.46	0.60	0.16	1.77	0.56	0.60	0.06	4.63	1.23	1.13	0.10
Mean	**176.83**	**0.47**	**0.55**	**0.19**	**1.77**	**0.59**	**0.61**	**0.05**	**4.70**	**0.74**	**0.64**	**0.10**
SD	**9.31**	**0.04**	**0.03**	**0.03**	**0.05**	**0.04**	**0.05**	**0.02**	**0.30**	**0.26**	**0.27**	**0.01**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Uterus and Ovaries	Uterus	Ovaries
002	190.19	0.23%	0.30%	0.10%	0.90%	0.29%	0.30%	0.03%	2.52%	0.33%	0.27%	0.06%
004	163.25	0.25%	0.30%	0.11%	1.07%	0.34%	0.36%	0.03%	2.63%	0.37%	0.29%	0.07%
006	182.67	0.26%	0.30%	0.13%	1.00%	0.37%	0.41%	0.04%	2.80%	0.36%	0.32%	0.04%
008	189.82	0.30%	0.31%	0.11%	0.91%	0.33%	0.34%	0.02%	2.69%	0.61%	0.57%	0.04%
010	177.40	0.26%	0.32%	0.11%	1.02%	0.35%	0.35%	0.04%	2.59%	0.47%	0.42%	0.05%
012	177.87	0.27%	0.31%	0.10%	0.97%	0.33%	0.33%	0.04%	2.61%	0.34%	0.27%	0.07%
014	168.13	0.25%	0.31%	0.08%	1.01%	0.34%	0.33%	0.01%	2.74%	0.32%	0.25%	0.07%
016	180.90	0.25%	0.29%	0.10%	1.01%	0.33%	0.34%	0.02%	2.76%	0.36%	0.30%	0.06%
018	169.14	0.29%	0.30%	0.15%	1.08%	0.35%	0.34%	0.03%	2.51%	0.28%	0.23%	0.05%
020	168.97	0.27%	0.36%	0.09%	1.05%	0.33%	0.36%	0.04%	2.74%	0.73%	0.67%	0.06%
Mean	**176.83**	**0.26%**	**0.31%**	**0.11%**	**1.00%**	**0.34%**	**0.35%**	**0.03%**	**2.66%**	**0.42%**	**0.36%**	**0.06%**
SD	**9.31**	**0.02%**	**0.02%**	**0.02%**	**0.06%**	**0.02%**	**0.03%**	**0.01%**	**0.10%**	**0.14%**	**0.15%**	**0.01%**

Organ Weights and Percent Body Weight for Male 200 mg/m^3 SB-8 Exposure Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Right Epididymus (g)	Right Testicle (g)	Left Epididymus (g)	Left Testicle (g)
021	261.62	0.49	0.71	0.17	1.82	0.90	0.86	0.05	7.32	0.18	1.42	0.45	1.45
023	304.85	0.60	0.83	0.23	1.88	1.02	1.04	0.07	9.48	0.19	1.36	0.50	1.56
025	304.35	0.65	0.78	0.16	1.88	0.96	0.96	0.05	8.70	0.24	1.56	0.51	1.56
027	319.02	0.62	0.92	0.20	1.86	0.97	1.03	0.06	8.59	0.23	1.54	0.32	1.06
029	326.96	0.60	0.85	0.24	1.86	1.00	0.98	0.05	8.97	0.24	1.58	0.50	1.63
031	287.96	0.64	0.78	0.16	1.86	1.00	1.00	0.04	8.25	0.23		0.49	1.60
033	314.95	0.63	0.83	0.19	1.88	1.14	1.10	0.05	9.99	0.25	1.63	0.50	1.58
035	320.34	0.66	0.92	0.23	1.89	1.04	1.03	0.04	9.62	0.21	1.47	0.49	1.62
037	275.45	0.56	0.80	0.21	1.82	0.89	0.90	0.05	8.74	0.23	1.41	0.47	1.46
039	296.79	0.61	0.82	0.30	1.87	0.95	1.00	0.05	8.99	0.24	1.41	0.47	1.54
Mean	**301.23**	**0.61**	**0.82**	**0.21**	**1.86**	**0.99**	**0.99**	**0.05**	**8.87**	**0.22**	**1.49**	**0.47**	**1.51**
SD	**21.04**	**0.05**	**0.06**	**0.04**	**0.02**	**0.07**	**0.07**	**0.01**	**0.75**	**0.02**	**0.09**	**0.06**	**0.17**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Right Epididymus	Right Testicle	Left Epididymus	Left Testicle
021	261.62	0.19%	0.27%	0.06%	0.70%	0.34%	0.33%	0.02%	2.80%	0.07%	0.54%	0.17%	0.55%
023	304.85	0.20%	0.27%	0.08%	0.62%	0.33%	0.34%	0.02%	3.11%	0.06%	0.45%	0.16%	0.51%
025	304.35	0.21%	0.26%	0.05%	0.62%	0.32%	0.32%	0.02%	2.86%	0.08%	0.51%	0.17%	0.51%
027	319.02	0.19%	0.29%	0.06%	0.58%	0.30%	0.32%	0.02%	2.69%	0.07%	0.48%	0.10%	0.33%
029	326.96	0.18%	0.26%	0.07%	0.57%	0.31%	0.30%	0.02%	2.74%	0.07%	0.48%	0.15%	0.50%
031	287.96	0.22%	0.27%	0.06%	0.65%	0.35%	0.35%	0.01%	2.86%	0.08%		0.17%	0.56%
033	314.95	0.20%	0.26%	0.06%	0.60%	0.36%	0.35%	0.02%	3.17%	0.08%	0.52%	0.16%	0.50%
035	320.34	0.21%	0.29%	0.07%	0.59%	0.32%	0.32%	0.01%	3.00%	0.07%	0.46%	0.15%	0.51%
037	275.45	0.20%	0.29%	0.08%	0.66%	0.32%	0.33%	0.02%	3.17%	0.08%	0.51%	0.17%	0.53%
039	296.79	0.21%	0.28%	0.10%	0.63%	0.32%	0.34%	0.02%	3.03%	0.08%	0.48%	0.16%	0.52%
Mean	**301.23**	**0.20%**	**0.27%**	**0.07%**	**0.62%**	**0.33%**	**0.33%**	**0.02%**	**2.94%**	**0.07%**	**0.49%**	**0.16%**	**0.50%**
SD	**21.04**	**0.01%**	**0.01%**	**0.01%**	**0.04%**	**0.02%**	**0.02%**	**0.00%**	**0.18%**	**0.01%**	**0.03%**	**0.02%**	**0.06%**

Yellow cell indicates missing data (not recorded)

Organ Weights and Percent Body Weight for Female 200 mg/m^3 SB-8 Exposure Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Uterus and Ovaries (g)	Uterus (g)	Ovaries (g)
022	176.41	0.42	0.57	0.24	1.81	0.59	0.60	0.05	4.97	1.10	1.02	0.08
024	172.95	0.45	0.57	0.18	1.81	0.56	0.56	0.06	5.10	0.61	0.51	0.10
026	167.19	0.51	0.49	0.16	1.79	0.58	0.58	0.07	4.45	0.79	0.63	0.16
028	177.09	0.47	0.54	0.23	1.80	0.62	0.60	0.04	4.91	0.53	0.41	0.12
030	185.43	0.48	0.60	0.21	1.84	0.64	0.63	0.05	5.27	0.69	0.58	0.11
032	178.57	0.48	0.49	0.18	1.74	0.54	0.65	0.10	4.82	0.60	0.46	0.14
034	167.48	0.49	0.55	0.18	1.71	0.56	0.61	0.05	4.53	0.57	0.47	0.10
036	177.15	0.44	0.58	0.17	1.82	0.60	0.61	0.05	4.76	1.19	1.04	0.15
038	184.52	0.44	0.66	0.25	1.85	0.68	0.64	0.08	5.07	0.56	0.42	0.14
040	158.48	0.45	0.58	0.22	1.70	0.57	0.63	0.06	4.38	0.44	0.36	0.08
Mean	**174.53**	**0.46**	**0.56**	**0.20**	**1.79**	**0.59**	**0.61**	**0.06**	**4.83**	**0.71**	**0.59**	**0.12**
SD	**8.27**	**0.03**	**0.05**	**0.03**	**0.05**	**0.04**	**0.03**	**0.02**	**0.30**	**0.25**	**0.25**	**0.03**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Uterus and Ovaries	Uterus	Ovaries
022	176.41	0.24%	0.32%	0.14%	1.03%	0.33%	0.34%	0.03%	2.82%	0.62%	0.58%	0.05%
024	172.95	0.26%	0.33%	0.10%	1.05%	0.32%	0.32%	0.03%	2.95%	0.35%	0.29%	0.06%
026	167.19	0.31%	0.29%	0.10%	1.07%	0.35%	0.35%	0.04%	2.66%	0.47%	0.38%	0.10%
028	177.09	0.27%	0.30%	0.13%	1.02%	0.35%	0.34%	0.02%	2.77%	0.30%	0.23%	0.07%
030	185.43	0.26%	0.32%	0.11%	0.99%	0.35%	0.34%	0.03%	2.84%	0.37%	0.31%	0.06%
032	178.57	0.27%	0.27%	0.10%	0.97%	0.30%	0.36%	0.06%	2.70%	0.34%	0.26%	0.08%
034	167.48	0.29%	0.33%	0.11%	1.02%	0.33%	0.36%	0.03%	2.70%	0.34%	0.28%	0.06%
036	177.15	0.25%	0.33%	0.10%	1.03%	0.34%	0.34%	0.03%	2.69%	0.67%	0.59%	0.08%
038	184.52	0.24%	0.36%	0.14%	1.00%	0.37%	0.35%	0.04%	2.75%	0.30%	0.23%	0.08%
040	158.48	0.28%	0.37%	0.14%	1.07%	0.36%	0.40%	0.04%	2.76%	0.28%	0.23%	0.05%
Mean	**174.53**	**0.27%**	**0.32%**	**0.12%**	**1.03%**	**0.34%**	**0.35%**	**0.03%**	**2.76%**	**0.40%**	**0.34%**	**0.07%**
SD	**8.27**	**0.02%**	**0.03%**	**0.02%**	**0.03%**	**0.02%**	**0.02%**	**0.01%**	**0.09%**	**0.14%**	**0.14%**	**0.02%**

Organ Weights and Percent Body Weight for Male 700 mg/m^3 SB-8 Exposure Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Right Epididymus (g)	Right Testicle (g)	Left Epididymus (g)	Left Testicle (g)
041	284.46	0.63	0.98	0.37	1.86	1.01	1.01	0.06	9.38	0.23	1.49	0.53	1.56
143	289.52	0.60	0.70	0.23	1.89	0.98	0.95	0.03	8.59	0.22	1.52	0.44	1.57
045	323.53	0.68	0.90	0.28	1.86	1.05	1.07	0.05	10.45	0.25	1.55	0.48	1.57
047	302.19	0.65	0.81	0.17	1.93	1.00	0.96	0.04	9.04	0.23	1.51	0.43	1.33
049	324.55	0.69	0.86	0.20	1.91	1.07	1.00	0.05	10.04	0.25	1.54	0.53	1.56
051	342.21	0.62	0.94	0.23	1.95	1.11	1.03	0.06	10.77	0.32	1.60	0.47	1.62
053	295.16	0.59	0.81	0.17	1.87	0.94	0.94	0.04	8.77	0.21	1.43	0.46	1.54
055	313.90	0.61	0.90	0.24	1.94	1.01	1.04	0.04	9.21	0.22	1.56	0.51	1.58
057	282.45	0.55	0.80	0.15	1.84	0.98	0.96	0.05	8.48	0.23	1.48	0.45	1.57
059	331.60	0.70	0.99	0.23	1.94	1.14	1.25	0.07	10.66	0.27	1.50	0.46	1.56
Mean	**308.96**	**0.63**	**0.87**	**0.23**	**1.90**	**1.03**	**1.02**	**0.05**	**9.54**	**0.24**	**1.52**	**0.48**	**1.55**
SD	**21.12**	**0.05**	**0.09**	**0.06**	**0.04**	**0.06**	**0.09**	**0.01**	**0.87**	**0.03**	**0.05**	**0.04**	**0.08**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Right Epididymus	Right Testicle	Left Epididymus	Left Testicle
041	284.46	0.22%	0.34%	0.13%	0.65%	0.36%	0.36%	0.02%	3.30%	0.08%	0.53%	0.19%	0.55%
143	289.52	0.21%	0.24%	0.08%	0.65%	0.34%	0.33%	0.01%	2.97%	0.08%	0.53%	0.15%	0.54%
045	323.53	0.21%	0.28%	0.09%	0.57%	0.32%	0.33%	0.02%	3.23%	0.08%	0.48%	0.15%	0.49%
047	302.19	0.22%	0.27%	0.06%	0.64%	0.33%	0.32%	0.01%	2.99%	0.08%	0.50%	0.14%	0.44%
049	324.55	0.21%	0.26%	0.06%	0.59%	0.33%	0.31%	0.02%	3.09%	0.08%	0.47%	0.16%	0.48%
051	342.21	0.18%	0.27%	0.07%	0.57%	0.32%	0.30%	0.02%	3.15%	0.09%	0.47%	0.14%	0.47%
053	295.16	0.20%	0.27%	0.06%	0.63%	0.32%	0.32%	0.01%	2.97%	0.07%	0.49%	0.16%	0.52%
055	313.90	0.19%	0.29%	0.08%	0.62%	0.32%	0.33%	0.01%	2.93%	0.07%	0.50%	0.16%	0.50%
057	282.45	0.19%	0.28%	0.05%	0.65%	0.35%	0.34%	0.02%	3.00%	0.08%	0.52%	0.16%	0.56%
059	331.60	0.21%	0.30%	0.07%	0.59%	0.34%	0.38%	0.02%	3.21%	0.08%	0.45%	0.14%	0.47%
Mean	**308.96**	**0.20%**	**0.28%**	**0.07%**	**0.62%**	**0.33%**	**0.33%**	**0.02%**	**3.08%**	**0.08%**	**0.49%**	**0.15%**	**0.50%**
SD	**21.12**	**0.01%**	**0.03%**	**0.02%**	**0.03%**	**0.01%**	**0.02%**	**0.00%**	**0.13%**	**0.01%**	**0.03%**	**0.01%**	**0.04%**

Organ Weights and Percent Body Weight for Female 700 mg/m^3 SB-8 Exposure Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Uterus and Ovaries (g)	Uterus (g)	Ovaries (g)
042	190.09	0.51	0.54	0.17	1.82	0.65	0.72	0.06	5.56	0.82	0.72	0.10
044	174.00	0.47	0.61	0.17	1.65	0.60	0.65	0.04	5.27	0.56	0.48	0.08
046	167.95	0.46	0.47	0.23	1.73	0.61	0.60	0.04	4.60	0.50	0.41	0.09
048	168.37	0.45	0.48	0.20	1.74	0.59	0.54	0.04	4.76	0.56	0.44	0.12
050	175.58	0.43	0.51	0.21	1.77	0.63	0.60	0.05	5.05	0.61	0.48	0.13
052	180.75	0.49	0.62	0.20	1.80	0.64	0.62	0.06	5.38	0.62	0.50	0.12
054	180.13	0.51	0.60	0.18	1.76	0.68	0.68	0.06	5.36	0.50	0.43	0.07
056	171.68	0.46	0.58	0.26	1.81	0.58	0.69	0.04	4.76	1.07	1.01	0.06
058	165.96	0.43	0.53	0.11	1.73	0.54	0.58	0.05	4.35	0.48	0.38	0.10
060	172.77	0.50	0.55	0.23	1.79	0.62	0.68	0.04	4.91	0.51	0.42	0.09
Mean	**174.73**	**0.47**	**0.55**	**0.20**	**1.76**	**0.61**	**0.64**	**0.05**	**5.00**	**0.62**	**0.53**	**0.10**
SD	**7.30**	**0.03**	**0.05**	**0.04**	**0.05**	**0.04**	**0.06**	**0.01**	**0.39**	**0.19**	**0.19**	**0.02**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Uterus and Ovaries	Uterus	Ovaries
042	190.09	0.27%	0.28%	0.09%	0.96%	0.34%	0.38%	0.03%	2.92%	0.43%	0.38%	0.05%
044	174.00	0.27%	0.35%	0.10%	0.95%	0.34%	0.37%	0.02%	3.03%	0.32%	0.28%	0.05%
046	167.95	0.27%	0.28%	0.14%	1.03%	0.36%	0.36%	0.02%	2.74%	0.30%	0.24%	0.05%
048	168.37	0.27%	0.29%	0.12%	1.03%	0.35%	0.32%	0.02%	2.83%	0.33%	0.26%	0.07%
050	175.58	0.24%	0.29%	0.12%	1.01%	0.36%	0.34%	0.03%	2.88%	0.35%	0.27%	0.07%
052	180.75	0.27%	0.34%	0.11%	1.00%	0.35%	0.34%	0.03%	2.98%	0.34%	0.28%	0.07%
054	180.13	0.28%	0.33%	0.10%	0.98%	0.38%	0.38%	0.03%	2.98%	0.28%	0.24%	0.04%
056	171.68	0.27%	0.34%	0.15%	1.05%	0.34%	0.40%	0.02%	2.77%	0.62%	0.59%	0.03%
058	165.96	0.26%	0.32%	0.07%	1.04%	0.33%	0.35%	0.03%	2.62%	0.29%	0.23%	0.06%
060	172.77	0.29%	0.32%	0.13%	1.04%	0.36%	0.39%	0.02%	2.84%	0.30%	0.24%	0.05%
Mean	**174.73**	**0.27%**	**0.31%**	**0.11%**	**1.01%**	**0.35%**	**0.36%**	**0.03%**	**2.86%**	**0.36%**	**0.30%**	**0.06%**
SD	**7.30**	**0.01%**	**0.03%**	**0.03%**	**0.04%**	**0.01%**	**0.03%**	**0.00%**	**0.13%**	**0.10%**	**0.11%**	**0.01%**

Organ Weights and Percent Body Weight for Male 2000 mg/m^3 SB-8 Exposure Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Right Epididymus (g)	Right Testicle (g)	Left Epididymus (g)	Left Testicle (g)
061	304.95	0.65	0.97	0.17	1.91	0.96	1.12	0.05	9.61	0.21	1.61	0.48	1.61
063	298.43	0.68	0.80	0.26	1.71	0.96	1.08	0.12	10.11	0.22	1.50	0.46	1.51
065	312.14	0.64	0.82	0.23	1.91	1.04	1.12	0.07	10.01	0.23	1.58	0.50	1.54
067	309.65	0.69	0.81	0.29	1.81	0.98	1.03	0.05	10.40	0.24	1.37	0.48	1.49
069	314.30	0.64	0.79	0.12	1.87	1.01	0.97	0.04	9.45	0.24	1.53	0.52	1.54
071	318.81	0.70	0.87	0.26	1.97	0.98	1.04	0.05	9.50	0.26	1.62	0.48	1.63
073	313.16	0.63	0.84	0.21	1.92	1.00	1.08	0.06	9.86	0.22	1.53	0.48	1.58
075	300.13	0.54	0.83	0.18	1.85	0.99	0.99	0.05	9.71	0.22	1.47	0.42	1.50
077	296.62	0.68	0.79	0.19	1.83	0.98	0.99	0.05	9.28	0.25	1.54	0.53	1.54
079	333.36	0.64	1.08	0.18	1.90	1.06	1.14	0.06	9.97	0.26	1.66	0.48	1.65
Mean	**310.16**	**0.65**	**0.86**	**0.21**	**1.87**	**1.00**	**1.06**	**0.06**	**9.79**	**0.23**	**1.54**	**0.48**	**1.56**
SD	**11.02**	**0.05**	**0.09**	**0.05**	**0.07**	**0.03**	**0.06**	**0.02**	**0.34**	**0.02**	**0.08**	**0.03**	**0.06**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Right Epididymus	Right Testicle	Left Epididymus	Left Testicle
061	304.95	0.21%	0.32%	0.06%	0.63%	0.31%	0.37%	0.02%	3.15%	0.07%	0.53%	0.16%	0.53%
063	298.43	0.23%	0.27%	0.09%	0.57%	0.32%	0.36%	0.04%	3.39%	0.07%	0.50%	0.15%	0.51%
065	312.14	0.21%	0.26%	0.07%	0.61%	0.33%	0.36%	0.02%	3.21%	0.07%	0.51%	0.16%	0.49%
067	309.65	0.22%	0.26%	0.09%	0.58%	0.32%	0.33%	0.02%	3.36%	0.08%	0.44%	0.16%	0.48%
069	314.30	0.20%	0.25%	0.04%	0.59%	0.32%	0.31%	0.01%	3.01%	0.07%	0.49%	0.17%	0.49%
071	318.81	0.22%	0.27%	0.08%	0.62%	0.31%	0.33%	0.02%	2.98%	0.08%	0.51%	0.15%	0.51%
073	313.16	0.20%	0.27%	0.07%	0.61%	0.32%	0.34%	0.02%	3.15%	0.07%	0.49%	0.15%	0.50%
075	300.13	0.18%	0.28%	0.06%	0.62%	0.33%	0.33%	0.02%	3.24%	0.07%	0.49%	0.14%	0.50%
077	296.62	0.23%	0.27%	0.06%	0.62%	0.33%	0.33%	0.02%	3.13%	0.08%	0.52%	0.18%	0.52%
079	333.36	0.19%	0.32%	0.05%	0.57%	0.32%	0.34%	0.02%	2.99%	0.08%	0.50%	0.14%	0.49%
Mean	**310.16**	**0.21%**	**0.28%**	**0.07%**	**0.60%**	**0.32%**	**0.34%**	**0.02%**	**3.16%**	**0.08%**	**0.50%**	**0.16%**	**0.50%**
SD	**11.02**	**0.02%**	**0.02%**	**0.02%**	**0.02%**	**0.01%**	**0.02%**	**0.01%**	**0.14%**	**0.00%**	**0.02%**	**0.01%**	**0.01%**

Organ Weights and Percent Body Weight for Female 2000 mg/m^3 SB-8 Exposure Group Rats

Animal #	Body Weight (g)	Spleen (g)	Heart (g)	Thymus (g)	Brain (g)	Right Kidney (g)	Left Kidney (g)	Adrenal Glands (g)	Liver (g)	Uterus and Ovaries (g)	Uterus (g)	Ovaries (g)
062	165.74	0.41	0.53	0.16	1.79	0.58	0.56	0.04	4.90	0.49	0.39	0.10
064	168.19	0.51	0.54	0.23	1.80	0.59	0.60	0.07	5.05	0.59	0.50	0.09
066	181.98	0.47	0.59	0.17	1.74	0.63	0.61	0.06	5.06	0.59	0.48	0.11
068	173.86	0.47	0.51	0.26	1.74	0.57	0.63	0.05		0.44	0.30	0.14
070	169.42	0.45	0.49	0.16	1.71	0.58	0.57	0.04	4.36	0.77	0.67	0.10
072	177.09	0.45	0.56	0.14	1.85	0.61	0.61	0.04	5.08	1.16	1.09	0.07
074	165.63	0.46	0.56	0.20	1.70	0.60	0.53	0.07	5.04	1.08	0.99	0.09
144	165.97	0.38	0.44	0.20	1.72	0.71	0.58	0.06	4.52	0.86	0.79	0.07
078	183.21	0.49	0.62	0.22	1.78	0.64	0.67	0.03	5.42	0.95	0.83	0.12
080	179.32	0.39	0.60	0.17	1.76	0.62	0.64	0.07	5.10	0.65	0.54	0.11
Mean	**173.04**	**0.45**	**0.54**	**0.19**	**1.76**	**0.61**	**0.60**	**0.05**	**4.95**	**0.76**	**0.66**	**0.10**
SD	**6.95**	**0.04**	**0.05**	**0.04**	**0.05**	**0.04**	**0.04**	**0.01**	**0.32**	**0.25**	**0.26**	**0.02**

% BODY WEIGHT

Animal #	Body Weight (g)	Spleen	Heart	Thymus	Brain	Right Kidney	Left Kidney	Adrenal Glands	Liver	Uterus and Ovaries	Uterus	Ovaries
062	165.74	0.25%	0.32%	0.10%	1.08%	0.35%	0.34%	0.02%	2.96%	0.30%	0.24%	0.06%
064	168.19	0.30%	0.32%	0.14%	1.07%	0.35%	0.36%	0.04%	3.00%	0.35%	0.30%	0.05%
066	181.98	0.26%	0.32%	0.09%	0.96%	0.35%	0.34%	0.03%	2.78%	0.32%	0.26%	0.06%
068	173.86	0.27%	0.29%	0.15%	1.00%	0.33%	0.36%	0.03%		0.25%	0.17%	0.08%
070	169.42	0.27%	0.29%	0.09%	1.01%	0.34%	0.34%	0.02%	2.57%	0.45%	0.40%	0.06%
072	177.09	0.25%	0.32%	0.08%	1.04%	0.34%	0.34%	0.02%	2.87%	0.66%	0.62%	0.04%
074	165.63	0.28%	0.34%	0.12%	1.03%	0.36%	0.32%	0.04%	3.04%	0.65%	0.60%	0.05%
144	165.97	0.23%	0.27%	0.12%	1.04%	0.43%	0.35%	0.04%	2.72%	0.52%	0.48%	0.04%
078	183.21	0.27%	0.34%	0.12%	0.97%	0.35%	0.37%	0.02%	2.96%	0.52%	0.45%	0.07%
080	179.32	0.22%	0.33%	0.09%	0.98%	0.35%	0.36%	0.04%	2.84%	0.36%	0.30%	0.06%
Mean	**173.04**	**0.26%**	**0.31%**	**0.11%**	**1.02%**	**0.35%**	**0.35%**	**0.03%**	**2.86%**	**0.44%**	**0.38%**	**0.06%**
SD	**6.95**	**0.02%**	**0.02%**	**0.02%**	**0.04%**	**0.03%**	**0.01%**	**0.01%**	**0.15%**	**0.14%**	**0.15%**	**0.01%**

Yellow cell indicates missing data (not recorded)

APPENDIX G. COMPLETE PATHOLOGY REPORT

Final Report – 90-Day Inhalation Toxicity Study of Swedish Biofuel in Rats (*Rattus norvegicus*) with Neurotoxicity Testing and Genotoxicity Assay

Study Protocol: F-WA-2012-0139A
Date of Report: 21 August 2013
Study Director: Dr. Mumy
Study Pathologist: D.E. Stoffregen

NARRATIVE PATHOLOGY REPORT

Accession Number Groups and Animal Numbers

Controls: 13WP0000 to 13WP0019 (TSRL 130035 to 130054); 1 to 20 (#9 replaced w/ #141)
Low Dose: 13WP0020 to 13WP0039 (TSRL 130055 to 130074); 21to 40
Mid Dose: 13WP0040 to 13WP0059 (TSRL 130075 to 130094); 41 to 60 (#43 replaced w/ #143)
High Dose: 13WP0060 to 13WP0079 (TSRL 130095 to 130114); 61 to 80 (#76 replaced w/ #144)

History

This study investigated the inhalation toxicity of SB-JP-8 fuel to Fischer 344 rats over a 13 week period to establish an occupational permissible exposure level for safe use of the fuel. The SB-8 was administered by whole-body inhalation exposure at three concentrations plus a control level (2000, 700, 200, and 0 mg/m^3) to Fischer 344 rats (10 rats per sex per dose) on a repeated basis (6 hours per day) for 5 days per week for 13 weeks.

Prior to the end of the exposures, animals were subjected to functional observations to evaluate any signs of toxicity related to the nervous system that may have affected behavior. The female estrous cycle and male sperm motility and morphology were analyzed to assess potential reproductive toxicity. At the end of the study, the rats were euthanized, and select tissues were collected and submitted for histopathological examination.

Supporting Documentation

The test results for neurotoxicity and reproductive toxicity reside with the Principal Investigator, and no abnormal results were reported to the pathologist.

Gross Observations

No gross observations were noted or recorded during necropsy and tissue trimming.

Histopathology by Animal

Formalin fixed, paraffin embedded, 5 micron, H&E stained sections of selected tissues were submitted for histopathologic evaluation. The histopathologic coding and diagnoses are listed on the attached Excel grading spreadsheet under the Block # / tissue and comments, respectively, by their respective accession numbers. The individual animal reports, grading and pictures are retained with the pathologist on the Filemaker database and H drive (Pathology > Protocols > NAMRU-D > Protocol 12-0139 - Swedish Biofuel (Mumy) > Grading or Pictures) and are available upon request.

Discussion

The histopathology results have not been statistically analyzed for significance.

Respiratory System

Nasal Cavity

There were no obvious lesions noted in the sections submitted for histopathological examination.

Larynx

A control rat exhibited chronic submucosal, periglandular, granulomatous inflammation that is attributed to an airborne irritant and is an incidental finding. Eight rats demonstrated either mineralization or osseous metaplasia (see Table 1); the lesions are common background findings in the rat and are not considered clinically significant.

Trachea

Four control rats have transmigrating neutrophils (PMNs) in the mucosal epithelium. The acute inflammation is attributed to airborne irritants. Two high dose rats have early mineralization (see Table 1), a common background lesion in all strains of rats.

Table 1. Pulmonary Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	200 mg/m^3	700 mg/m^3	2000 mg/m^3
Larynx				
Inflammation	1 – F (+)			
Mineralization	3 – M (+); 2 – F (+)			
Trachea				
Transmigrating PMNs				
Mineralization				2 – M (+)
Lungs				
Type II Pneumocyte Hyperplasia				**4 – M (+)**
Subpleural lymphoid aggregates	5 – M (+); 2 – F (+)	3 – M (+); 2 – F (+)	4 – M (+); 4 – F (+)	2 – M (+); 3 – F (+)
Alveolar histiocytosis				**3 – M (+);** 1 – F (+)
Mineralization	2 – M (+); 1 – F (+)	4 – M (+); 4 – F (+)		
Osseous Metaplasia		1 – M (+); 1 – F (+)		

M = Male; F = Female; Minimal (+); **Bolded results indicate an effect related to test substance exposure**

Lungs

Four male rats in the high dose group exhibited focal alveolar epithelial hyperplasia (see Table 1), characterized by an increase in type II pneumocytes and prominent interalveolar septa. In addition, there was an increase in alveolar macrophages (alveolar histiocytosis) in the affected areas, a common finding with this type of lesion. The remaining lesions: subpleural lymphoid aggregates, mineralization and osseous metaplasia are common background lesions and are not clinically significant.

Interpretation of Findings

The alveolar epithelial hyperplasia (see Figures 11 and 12) is a proliferative lesion that may regress or progress from hyperplasia to carcinoma. Historical data from the National Toxicology Program (NTP) carcinogenic studies list the incidence of alveolar adenomas and carcinomas in untreated Fischer rats to be approximately 1.3 to 1.0 percent respectively for males, and 0.8 to 0.3 percent for female rats. A longer study with a larger number of animals may be required to

determine the overall, long term effect to the respiratory by gender. All remaining lesions in the respiratory system are common background lesions found in research rats. The changes were evident in most treatment groups and the number of animals affected or severity of lesions did not correlate with an increase in the amount of test article administered.

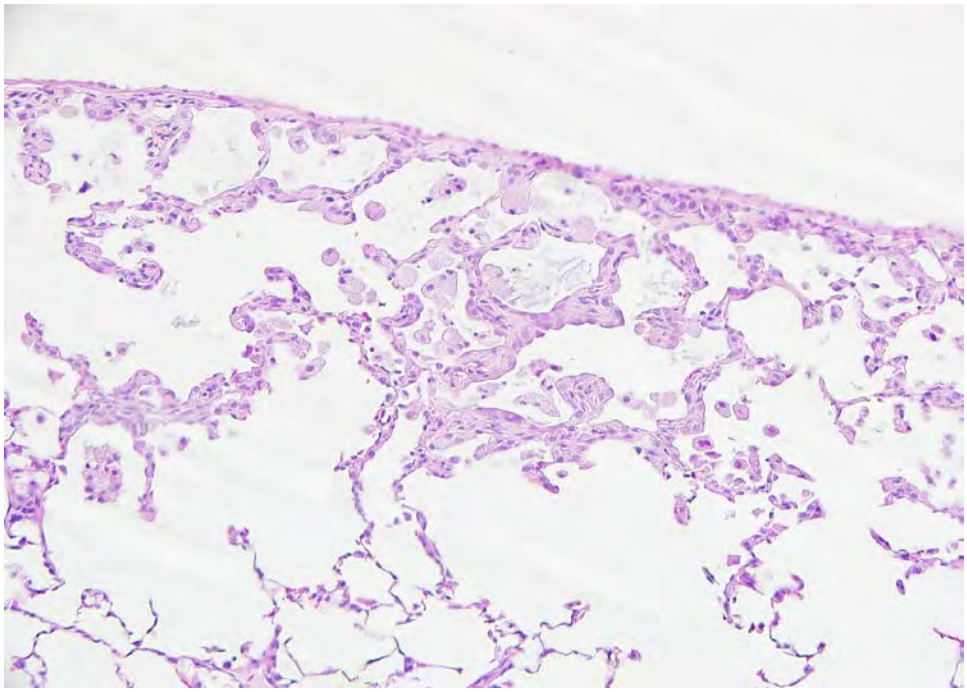

Figure 1. Alveolar Epithelial Hyperplasia with Alveolar Histiocytosis. Photo from Animal 61 exposed for 90-days to 2000 mg/m^3 SB-8 alternative jet fuel.

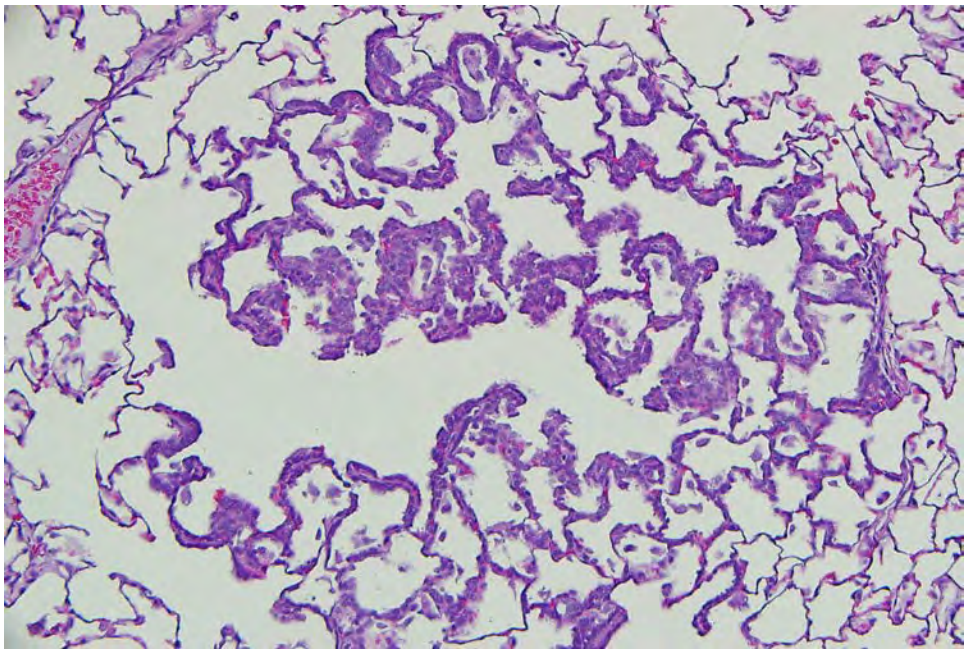

Figure 2. Alveolar Epithelial Hyperplasia with Alveolar Macrophages. Photo from Animal 77 exposed for 90-days to 2000 mg/m^3 SB-8 alternative jet fuel.

Note. The processing and microtomy issues encountered with the nasal cavity, larynx and trachea, and percentage of lungs that were poorly inflated or atelectic may have affected the ability to detect subtle lesions during histological examination of slides sent to TSRL – Fort Sam Houston.

Cardiovascular System

Heart

Three male rats, one control and two high dose, exhibited spontaneous cardiomyopathy characterized by infiltration of lymphoid cells, degenerative to necrotic and loss of cardiomyocytes with replacement fibrosis (see Table 2). The remaining affected rats had myocardial lymphoid infiltrates, degenerating cardiomyocytes and mineralization.

Table 2. Cardiovascular Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3 SB-8
Heart		
Inflammation	7-M (+); 5-F (+)	9-M (+); 3-F (+)
Degeneration & loss	9-M (+); 5-F (+)	9-M (+); 3-F (+)
Fibrosis	1-M (+)	2-M (+)
Mineralization	1-M (+)	
Great Vessels		
Medial hypertrophy	1-M (+); 1-F (+)	1-M (+); 1-F (+)
Medial degeneration	1-M (+); 1-F (+)	1-F (+)
Mineralization	2-M (+); 1-F (+)	3-M (+)
Cartilaginous foci	2-M (+)	3-M (+)

M = Male; F = Female; Minimal (+)

Great Vessels

Two female rats in the control and high dose group had vascular medial hyperplasia with vacuolar degeneration and mineralization (see Table 2). Two males, one from each group had vascular medial hyperplasia. Remaining lesions in both groups exhibited mineralization to cartilaginous metaplasia.

Interpretation of Findings

Cardiomyopathy is a common lesion in aging rats. Mineralization and cartilaginous foci are also common findings in both young and older rats. Vascular medial hypertrophy is a rare finding primarily involving pulmonary arteries and medial degeneration is a common finding in the coronary arteries. All lesions are considered background lesions and are not related to the test article.

Nervous System

Cerebrum

Mineral concretions (see Table 3) in the brain without concurrent necrosis are considered an incidental finding and are not clinically significant.

Table 3. Nervous System Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3 SB-8
Cerebrum		
Mineralization		2-M (+); 2-F (+)

M = Male; F = Female; Minimal (+)

Interpretation of Findings

The sections of brain submitted for histopathologic examination are essentially normal. The aforementioned lesions are common background lesions in aging rats and are not clinically significant.

Gastrointestinal System

Salivary Gland

The epithelial vacuolar degeneration (see Table 4) is an incidental finding.

Table 4. Gastrointestinal Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3 SB-8
Salivary Gland		
Vacuolar change	1-M (+)	
Stomach		
Gastric gland cystic dilation	2-M (+); 1-F (+)	
Mucosal lymphoid infiltrates	1-F (+)	1-F (+)
Mineralization	4-M (+); 1-F (+)	3-M (+); 4-F (+)
Cartilaginous foci		1-F (+)
Mesenteric Lymph Node		
Hemorrhage	1-M (+); 2-F (+)	1-M (+); 1-F (+)
Large Intestines		
Vascular plasmacytosis		1-M (+)

M = Male; F = Female; Minimal (+)

Stomach

Cystic dilation of the gastric glands, lymphoid infiltrates at the limiting ridge at the junction of the cardia and gastric mucosa and mineralization that occasionally progresses to a cartilaginous foci (see Table 4) are all common findings in the rat.

Mesenteric Lymph Node

Chronic draining hemorrhage (see Table 4) is not uncommon in the rat, is minimal and not clinically significant.

Large Intestines

Plasmacytosis (see Table 4) is common in the gastrointestinal system and is not related to the test article.

Interpretation of Findings

The gastrointestinal tissues submitted for histopathological examination are essentially normal.

Note. Much of the intestinal tissues appeared mineralized due to processing and staining artifact.

Hepatobiliary System

Liver

The cellular infiltrates are a combination of minimal foci of haemopoiesis and lymphoid cells. The periportal lipid vacuoles (Table 5) develop spontaneously in the hepatocytes and can also occur in the liver during necropsy when there is a delay between death and removal of the liver. Bile duct hyperplasia is a common aging change and the hyperplasia is occasionally accompanied by minimal inflammatory cell infiltrates. Cartilaginous foci are an incidental finding.

Table 5. Hepatic Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3 SB-8
Liver		
Cellular infiltrates	3-M (+); 8-F (+)	8-M (+); 10-F (+)
Lipid Vacuoles (periportal)	1-F (+)	1-F (+)
Bile duct hyperplasia	1-M (+); 1-F (+)	1-M (+); 2-F (+)
Cartilaginous foci		1-M (+)

M = Male; F = Female; Minimal (+)

Interpretation of Findings

The sections of liver submitted for examination are essentially normal.

Urinary System

Kidneys

Left (longitudinal) and right (transverse) kidneys were submitted for histopathological examination.

Interpretation of Findings

An early stage of chronic progressive glomerulonephropathy (PGN), a common age-related degenerative disease, especially in this strain of rat, was a common finding in over 95 percent of the rats in all groups. Features of PGN include varying degrees of: peritubular fibrosis of the proximal convoluted tubules, periglomerular fibrosis, tubular ectasia, chronic interstitial nephritis, interstitial fibrosis with stromal collapse, proteinosis and renal tubular mineralization. The lesions in the control, low dose and mid dose groups are rare to minimal with the exception

of tubular degeneration in the mid dose group which is mild. In the high dose group all characteristic lesions of PGN are mild. The increased severity and incidence of occurrence in the mid and high dose groups suggest a test article causal effect.

Table 6. Renal Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	200 mg/m^3	700 mg/m^3	2000 mg/m^3
Kidneys				
Tubular degeneration	10-M (+)	10-M (+)	10-M (++)	10-M (++)
Tubular regeneration	8-M (+)	10-M (+)	10-M (+)	10-M (++)
Peritubular fibrosis	10-M (+)	10-M (+)	10-M (+)	10-M (++)
Periglomerular fibrosis	2-M (+)	6-M (+)	8-M (+)	10-M (++)
Inflammation	2-M (+)	5-M (+)	9-M (+)	10-M (++)
Hyaline droplets				8-M (++)
Mineralization	10-M (+); 10-F (+)	10-M (+)	10-M (+)	10-M (++); 10-F (++)
Hyaline casts	2-M (+)			6-M (+)
Tubular ectasia	2-M (+)			
Interstitial fibrosis		1-M (+)		5-M (++)

M = Male; F = Female; Minimal (+), Mild (++)

Reproductive System

Left (longitudinal) and right (transverse) testes with attached epididymis, accessory sex glands (seminal vesicle, coagulating gland, ventral prostate gland and dorsolateral prostate gland) were examined. Ovaries with oviduct, uterine horns (longitudinal and transverse), uterine body, cervix, vagina were also examined.

Testes

Atrophic seminiferous tubules (Table 7) is a common background change in rat testes.

Epididymis

The sperm granuloma (Table 7) is an incidental finding in the control rat.

Ovaries

The minimal lymphoid infiltrates (Table 7) in the ovaries is an incidental finding and is not clinically significant.

Table 7. Reproductive Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3
Testes		
Seminiferous tubular degeneration	1-M (+)	2-M (+)
Epididymis		
Sperm granuloma	1-M (+)	
Ovaries		
Inflammation	1-F (+)	1-F (+)

M = Male; F = Female; Minimal (+)

Interpretation of Findings

The male reproductive tissues submitted for examination are essentially normal. Female reproductive organs are essentially normal and exhibited normal features of the particular phase of the estrus cycle at the time of necropsy.

Special Senses

Eye

Mineralization in the conjunctival gland (Table 8) is a common finding in aging rats.

Table 8. Ocular Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3
Eye		
Conjunctival gland mineralization	3-M (+)	4-M (+)
Harderian Gland		
Inflammation	2-M (+); 5-F (+)	2-M (++); 3-F (++)
Porphorin accumulation	8-M (+); 9-F (+)	10-M (+); 10-F (+)

M = Male; F = Female; Minimal (+), Mild (++)

Harderian Gland

Porphorin or pigment accumulation and lymphoid infiltrates are commonly found in aging rats.

Interpretation of Findings

With the exception of the Harderian gland inflammation, all remaining lesions are considered common background changes. The increase in cellular infiltrates in the Harderian gland is slightly increased in the high dose group in comparison to the control groups and is attributed to ocular irritation from the test article.

Endocrine System

Spleen

Increased hemosiderin and lymphocytolysis or lymphoid cell apoptosis (Table 9) are common background changes in rats.

Table 9. Endocrine Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3
Spleen		
Hemosiderosis	10-M (+); 10-F (+)	10-M (+); 10-F (+)
Lymphocytolysis	1-M (+); 2-F (+)	2-M (+); 3-F (+)
Pancreas		
Inflammation	1-M (+)	1-F (+)
Single cell necrosis	1-F (+)	
Exocrine pancreatic acinar atrophy		1-F (+)
Adrenal Gland		
Inflammation		1-F (+)
Pituitary Gland		
Rathke's Pouch cyst	3-M (+); 6-F (+)	4-M (+); 5-F (+)
Pars distalis hyperplasia	1-M (+)	

M = Male; F = Female; Minimal (+), Mild (++)

Exocrine Pancreas

Lymphoid infiltrates and apoptotic pancreatic acinar cells (Table 9) are common findings in an aging rat pancreas and are not considered significant. Exocrine pancreatic acinar atrophy is and incidental finding in both young and old rats and is of no toxicological significance.

Adrenal Gland

The inflammation (Table 9) in the high dose female is considered an incidental finding.

Pituitary Gland

Pituitary cysts (Table 9) are very common in rats. The anterior pituitary hyperplasia may occur and usually involves proliferation of a single cell type without compression of adjacent tissues.

Bone Marrow

Atrophy (Table 10) of bone marrow is occasionally seen in young adult and aging rats; females are more frequently affected than males. There are no concurrent clinical manifestations and the cause of this change is unknown.

Interpretation of Findings

The findings in the organs that comprise the endocrine system are common background lesions and are not toxicologically significant. The bone marrow atrophy noted in the females in the control and high dose groups is not toxicologically significant.

Table 10. Bone Marrow Lesions - SB-8 Alternative Jet Fuel Subchronic Inhalation Toxicity Study

	Control	2000 mg/m^3
Bone Marrow		
Atrophy	2-F (+)	3-F (++)

M = Male; F = Female; Minimal (+), Mild (++)

Comprehensive Interpretation

Lungs

The respiratory system is one of the target organs susceptible to hydrocarbons. The proliferative lesion, alveolar epithelial hyperplasia, may regress or progress from hyperplasia to carcinoma. A longer study with a larger number of animals may be required to determine the overall, long term effect to the respiratory system by gender.

Kidneys

Nephropathy is a spontaneous disease that commonly occurs early in life and progresses to end-stage renal failure. Features of PGN observed in this study included varying degrees of: peritubular fibrosis of the proximal convoluted tubules, periglomerular fibrosis, tubular ectasia, chronic interstitial nephritis, interstitial fibrosis with stromal collapse, proteinosis, hyaline droplet nephropathy (high dose group only) and renal tubular mineralization. The disease is more common and prominent in males and is more severe as they age. The cause is multifactorial but protein overload is the most common culprit, with the proximal convoluted tubules being the most common site for this lesion. In the mid and high dose group there is a cause and effect observed with an increased incidence and severity of the lesions commonly observed in PGN.

Hyaline droplet nephropathy or "hydrocarbon nephropathy", a feature of PGN, are terms for a spectrum of morphologic changes in the kidneys of rats that can be induced by various chemicals. A possible mechanism of action for the abnormal accumulation of α_{2u}-globulin within the cytoplasmic phagolysosomes of the proximal tubular epithelium is either, binding of the chemical with the α_{2u}-globulin or structural alteration resulting in the inability of the lysosomal enzymes to degrade the protein complex. Further long term testing of the agent is warranted to determine degree of severity or incidence in each gender with prolonged exposure, or withdrawal after prolonged exposure, to assess lesions attributed to the test article.

//signed//
Deidre E. Stoffregen, DVM, DACVP
LTC, VC, USA
Chief, Pathology

APPENDIX H. BLOOD CLOTTING PARAMETERS, HEMATOLOGY, AND CLINICAL CHEMISTRY

ACRONYMS DEFINED

NR	not reported
Clotting Parameters	
INR	international normalized ratio
PT-P	prothrombin time
Hematology Parameters	
BA	basophils
EO	eosinophils
HB	hemoglobin
HCT	hematocrit
LY	lymphocytes
MCH	mean corpuscular
MCHC	mean corpuscular hemoglobin concentration
MCV	mean corpuscular volume
MO	monocytes
MPV	mean platelet volume
NE	neutrophils
PLT	platelets
RBC	red blood cells
RDW	red cell distribution width
WBC	white blood cells
Clinical Chemistry Parameters	
ALB	albumin
ALKP	alkaline phosphatase
ALT	alanine transaminase
AST	aspartate transaminase
BUN	blood urea nitrogen
CHOL	cholesterol
CK	creatine kinase
Cl-	chloride
CREA	creatinine
GLOB	globulins
GLU	glucose
K+	potassium
Na+	sodium
TBIL	total bilirubin
TP	total protein
TRIG	triglycerides

Blood Clotting Parameter Values for Male Rats

Animal #	Dose Group	Sex	PT-P	INR	Comment
001	C	M	22.4	1.7	
003	C	M	32.7	2.5	
005	C	M	28.1	2.2	
007	C	M			No data
141	C	M	25.2	1.9	
011	C	M	22.4	1.7	
013	C	M			No data
015	C	M	29.6	2.3	
017	C	M	26.6	2.0	
019	C	M	29.6	2.3	
021	L	M	21.1	1.6	
023	L	M	28.1	2.2	
025	L	M	16.2	1.2	
027	L	M	14.0	1.1	
029	L	M	29.6	2.3	
031	L	M	32.7	2.5	
033	L	M	32.7	2.5	
035	L	M	32.7	2.5	
037	L	M	25.2	1.9	
039	L	M	25.2	1.9	
041	M	M	31.1	2.4	
143	M	M	32.7	2.5	
045	M	M	35.9	2.8	
047	M	M			No data
049	M	M	28.1	2.2	
051	M	M	32.1	2.5	
053	M	M	32.7	2.5	
055	M	M	37.6	2.9	
057	M	M	22.4	1.7	
059	M	M	29.6	2.3	
061	H	M	28.1	2.2	
063	H	M	32.7	2.5	
065	H	M	7.3	0.8	
067	H	M	28.1	2.2	
069	H	M			No data
071	H	M	32.7	2.5	
073	H	M	37.6	2.9	
075	H	M	29.6	2.3	
077	H	M			No data
079	H	M	32.7	2.5	

Blood Clotting Parameter Values for Female Rats

Animal #	Dose Group	Sex	PT-P	INR	Comment
002	C	F	37.6	2.9	
004	C	F	42.9	3.3	
006	C	F	37.6	2.9	
008	C	F	42.9	3.3	
010	C	F	42.9	3.3	
012	C	F	32.7	2.5	
014	C	F	39.3	3.0	
016	C	F	11.9	0.9	
018	C	F	35.9	2.8	
020	C	F	11.9	0.9	
022	L	F	31.1	2.4	
024	L	F	39.3	3.0	
026	L	F	39.3	3.0	
028	L	F	35.9	2.8	
030	L	F	41.1	3.2	
032	L	F	35.9	2.8	
034	L	F	32.7	2.5	
036	L	F			No data
038	L	F	35.9	2.8	
040	L	F	34.3	2.6	
042	M	F	32.7	2.5	
044	M	F	9.9	0.8	
046	M	F	41.1	3.2	
048	M	F	11.9	0.9	
050	M	F	35.9	2.8	
052	M	F	35.9	2.8	
054	M	F	39.3	3.0	
056	M	F	31.1	2.4	
058	M	F	14.0	1.1	
060	M	F	32.7	2.5	
062	H	F	35.9	2.8	
064	H	F	32.7	2.5	
066	H	F			No data
068	H	F	35.9	2.8	
070	H	F	35.9	2.8	
072	H	F	35.9	2.8	
074	H	F	18.6	1.4	
144	H	F	35.9	2.8	
078	H	F	32.7	2.5	
080	H	F	22.4	1.7	

Hematology Values for Male Rats following Exposure to SB-8

Sample ID	WBC#	NE#	LY#	MO#	EO#	BA#	NE%	LY%	MO%	EO%	BA%	RBC	HB	HCT%	MCV	MCH	MCHC	RDW%	PLT	MPV
units	K/uL	K/uL	K/uL	K/uL	K/uL	K/uL	%	%	%	%	%	M/uL	g/dL	%	fL	Pg	g/dL	%	K/uL	fL
CONTROL001	7.36	2.95	3.65	0.72	0.030	0.010	40.0	49.6	9.82	0.38	0.18	9.91	17.6	53.0	53.5	17.8	33.2	16.5	627	6.80
CONTROL001	7.52	3.18	3.17	1.14	0.010	0.020	42.4	42.2	15.12	0.08	0.30	9.59	17.2	51.8	54.0	17.9	33.2	16.6	611	7.10
1	7.44	3.07	3.41	0.93	0.020	0.015	41.2	45.9	12.47	0.23	0.24	9.75	17.4	52.4	53.8	17.9	33.2	16.6	619	6.95
CONTROL003	8.78	2.86	5.08	0.82	0.020	0.000	32.6	57.9	9.30	0.23	0.05	9.19	17.6	49.7	54.1	19.2	35.4	16.5	636	6.80
CONTROL003	8.86	2.89	5.00	0.96	0.010	0.000	32.6	56.4	10.83	0.11	0.00	9.09	17.1	48.8	53.7	18.8	35.0	16.2	606	6.80
3	8.82	2.88	5.04	0.89	0.015	0.000	32.6	57.2	10.07	0.17	0.03	9.14	17.4	49.3	53.9	19.0	35.2	16.4	621	6.80
CONTROL005	7.78	2.29	4.85	0.63	0.000	0.010	29.5	62.4	8.09	0.04	0.07	9.20	17.5	48.9	53.2	19.0	35.8	16.1	630	7.00
CONTROL005	7.88	2.51	4.48	0.89	0.000	0.000	31.8	56.8	11.33	0.04	0.00	9.38	17.8	50.6	53.9	19.0	35.2	15.9	686	7.00
5	7.83	2.40	4.67	0.76	0.000	0.005	30.6	59.6	9.71	0.04	0.04	9.29	17.7	49.8	53.6	19.0	35.5	16.0	658	7.00
CONTROL007	8.68	2.31	5.54	0.79	0.030	0.010	26.6	63.8	9.11	0.40	0.07	9.00	15.8	49.5	55.0	17.6	31.9	15.3	247	8.00
CONTROL007	8.36	2.14	5.32	0.87	0.010	0.020	25.6	63.6	10.44	0.17	0.23	9.03	16.5	49.5	54.8	18.3	33.3	15.3	509	7.50
7	8.52	2.23	5.43	0.83	0.020	0.015	26.1	63.7	9.78	0.29	0.15	9.02	16.2	49.5	54.9	18.0	32.6	15.3	378	7.75
CONTROL141	5.92	1.48	4.00	0.41	0.020	0.000	25.1	67.6	6.97	0.38	0.00	9.53	17.2	51.4	53.9	18.0	33.5	15.9	615	6.50
CONTROL141	6.04	1.72	3.75	0.55	0.010	0.000	28.5	62.1	9.18	0.12	0.08	8.96	16.0	48.4	54.0	17.9	33.1	15.6	690	6.90
141	5.98	1.60	3.88	0.48	0.015	0.000	26.8	64.9	8.08	0.25	0.04	9.25	16.6	49.9	54.0	18.0	33.3	15.8	653	6.70
CONTROL011	9.22	2.47	5.95	0.79	0.000	0.000	26.8	64.6	8.55	0.00	0.05	9.20	17.1	48.6	52.8	18.6	35.2	16.5	735	7.20
CONTROL011	8.96	2.42	5.97	0.56	0.010	0.000	27.0	66.6	6.25	0.16	0.00	9.33	16.5	50.0	53.6	17.7	33.0	15.7	686	7.20
11	9.09	2.45	5.96	0.68	0.005	0.000	26.9	65.6	7.40	0.08	0.03	9.27	16.8	49.3	53.2	18.2	34.1	16.1	711	7.20
CONTROL013	9.04	2.49	5.79	0.68	0.060	0.020	27.6	64.0	7.53	0.63	0.21	9.57	16.8	51.5	53.8	17.6	32.6	16.4	679	7.50
CONTROL013	9.02	2.66	5.45	0.85	0.040	0.030	29.5	60.4	9.39	0.39	0.31	9.75	17.5	52.6	53.9	17.9	33.3	15.6	647	7.50
13	9.03	2.58	5.62	0.77	0.050	0.025	28.5	62.2	8.46	0.51	0.26	9.66	17.2	52.1	53.9	17.8	33.0	16.0	663	7.50
CONTROL015	9.72	2.54	6.48	0.70	0.000	0.000	26.1	66.6	7.19	0.00	0.05	9.51	17.5	50.9	53.5	18.4	34.4	16.1	653	7.20
CONTROL015	9.26	2.25	6.12	0.87	0.010	0.000	24.3	66.1	9.39	0.12	0.05	9.18	16.9	49.1	53.5	18.4	34.4	16.0	655	7.50
15	9.49	2.40	6.30	0.79	0.005	0.000	25.2	66.4	8.29	0.06	0.05	9.35	17.2	50.0	53.5	18.4	34.4	16.1	654	7.35
CONTROL017	8.22	2.33	5.48	0.39	0.020	0.000	28.4	66.7	4.74	0.23	0.00	9.13	16.3	50.1	54.9	17.9	32.5	15.3	626	6.80
CONTROL017	8.46	2.48	5.37	0.59	0.020	0.010	29.3	63.5	7.03	0.19	0.06	9.00	16.9	49.8	55.3	18.8	33.9	14.9	647	6.90
17	8.34	2.41	5.43	0.49	0.020	0.005	28.8	65.1	5.89	0.21	0.03	9.07	16.6	50.0	55.1	18.4	33.2	15.1	637	6.85
CONTROL019	7.62	2.49	4.49	0.62	0.020	0.000	32.7	59.0	8.16	0.23	0.00	9.53	18.1	51.9	54.5	19.0	34.9	16.1	708	7.10
CONTROL019	7.42	2.41	4.60	0.37	0.030	0.010	32.5	62.0	5.00	0.36	0.07	9.81	17.9	53.5	54.5	18.2	33.5	16.5	674	7.10
19	7.52	2.45	4.55	0.50	0.025	0.005	32.6	60.5	6.58	0.30	0.04	9.67	18.0	52.7	54.5	18.6	34.2	16.3	691	7.10
LOW 021	4.04	1.07	2.41	0.47	0.060	0.030	26.4	59.8	11.75	1.40	0.64	8.67	15.2	48.3	55.7	17.5	31.5	16.1	440	7.00
LOW 021	3.94	1.22	2.31	0.40	0.000	0.010	31.1	58.7	10.10	0.00	0.13	8.76	16.5	49.5	56.5	18.8	33.3	15.5	454	6.90
21	3.99	1.15	2.36	0.44	0.030	0.020	28.8	59.2	10.93	0.70	0.39	8.72	15.9	48.9	56.1	18.2	32.4	15.8	447	6.95
LOW 023	8.58	2.50	5.14	0.94	0.000	0.000	29.1	59.9	11.01	0.00	0.00	9.32	17.2	49.4	53.0	18.5	34.8	16.9	688	6.80
LOW 023	8.50	2.63	5.12	0.70	0.050	0.000	30.9	60.3	8.28	0.56	0.00	9.11	17.3	48.3	53.0	19.0	35.8	16.5	712	7.30
23	8.54	2.57	5.13	0.82	0.025	0.000	30.0	60.1	9.65	0.28	0.00	9.22	17.3	48.9	53.0	18.8	35.3	16.7	700	7.05
LOW 025	8.10	1.95	5.28	0.80	0.040	0.040	24.0	65.2	9.83	0.48	0.48	9.85	17.6	53.7	54.5	17.9	32.8	16.5	798	7.20
LOW 025	7.96	1.93	5.28	0.69	0.020	0.030	24.3	66.4	8.67	0.28	0.41	9.80	17.5	53.6	54.7	17.9	32.6	16.1	538	7.10
25	8.03	1.94	5.28	0.75	0.030	0.035	24.2	65.8	9.25	0.38	0.45	9.83	17.6	53.7	54.6	17.9	32.7	16.3	668	7.15
LOW 027	7.60	1.85	5.15	0.59	0.000	0.000	24.4	67.8	7.80	0.02	0.00	9.37	17.9	50.9	54.3	19.1	35.2	15.9	701	6.80
LOW 027	7.62	2.01	5.01	0.59	0.000	0.000	26.4	65.8	7.79	0.04	0.06	9.53	17.5	51.6	54.1	18.4	33.9	16.2	626	6.60
27	7.61	1.93	5.08	0.59	0.000	0.000	25.4	66.8	7.80	0.03	0.03	9.45	17.7	51.3	54.2	18.8	34.6	16.1	664	6.70
LOW 029	6.60	1.77	4.47	0.36	0.000	0.000	26.8	67.7	5.48	0.00	0.00	9.77	17.2	52.4	53.6	17.6	32.8	16.4	697	7.30
LOW 029	6.76	1.94	4.33	0.48	0.010	0.000	28.7	64.1	7.04	0.17	0.00	9.85	17.6	53.2	54.0	17.9	33.1	15.9	728	7.20
29	6.68	1.86	4.40	0.42	0.005	0.000	27.8	65.9	6.26	0.09	0.00	9.81	17.4	52.8	53.8	17.8	33.0	16.2	713	7.25
LOW 31	7.66	2.24	4.70	0.73	0.000	0.000	29.2	61.3	9.48	0.00	0.00	9.43	16.2	50.9	54.0	17.2	31.8	16.5	650	6.90
LOW 31	7.64	2.28	4.97	0.38	0.000	0.010	29.8	65.1	5.01	0.00	0.13	8.94	17.5	49.1	54.9	19.6	35.6	16.1	732	6.70
31	7.65	2.26	4.84	0.56	0.000	0.005	29.5	63.2	7.25	0.00	0.07	9.19	16.9	50.0	54.5	18.4	33.7	16.3	691	6.80
LOW 033	8.58	2.63	5.50	0.44	0.010	0.000	30.7	64.1	5.13	0.09	0.00	9.55	16.6	51.4	53.8	17.4	32.3	16.8	772	7.40
LOW 033	8.36	2.44	5.26	0.64	0.010	0.010	29.2	63.0	7.66	0.17	0.06	9.35	16.6	49.8	53.3	17.8	33.3	15.7	716	7.30
33	8.47	2.54	5.38	0.54	0.010	0.005	29.9	63.5	6.40	0.13	0.03	9.45	16.6	50.6	53.6	17.6	32.8	16.3	744	7.35
LOW 035	7.34	2.30	4.46	0.58	0.000	0.000	31.3	60.7	7.97	0.00	0.00	9.38	16.3	50.9	54.3	17.4	32.0	15.8	700	7.20
LOW 035	7.10	2.03	4.32	0.74	0.010	0.000	28.6	60.9	10.42	0.08	0.00	9.38	16.6	51.4	54.8	17.7	32.3	16.1	719	7.40
35	7.22	2.17	4.39	0.66	0.005	0.000	30.0	60.8	9.20	0.04	0.00	9.38	16.5	51.2	54.6	17.6	32.2	16.0	710	7.30
LOW037	8.80	2.40	5.89	0.43	0.050	0.030	27.3	66.9	4.89	0.58	0.29	8.96	16.6	47.9	53.5	18.5	34.7	15.7	722	7.10
LOW037	8.68	2.53	5.49	0.66	0.000	0.000	29.1	63.3	7.55	0.04	0.00	9.16	17.4	49.0	53.5	19.0	35.5	15.7	686	7.30
37	8.74	2.47	5.69	0.55	0.025	0.015	28.2	65.1	6.22	0.31	0.15	9.06	17.0	48.5	53.5	18.8	35.1	15.7	704	7.20
LOW 039	6.76	1.83	4.50	0.42	0.000	0.000	27.1	66.6	6.28	0.04	0.00	8.65	15.2	47.9	55.4	17.6	31.7	15.2	659	7.30
LOW 039	6.58	1.59	4.46	0.48	0.040	0.000	24.1	67.8	7.36	0.62	0.07	8.47	14.9	46.8	55.2	17.6	31.8	15.2	683	7.40

Sample ID	WBC#	NE#	LY#	MO#	EO#	BA#	NE%	LY%	MO%	EO%	BA%	RBC	HB	HCT%	MCV	MCH	MCHC	RDW%	PLT	MPV
units	K/uL	K/uL	K/uL	K/uL	K/uL	K/uL	%	%	%	%	%	M/uL	g/dL	%	fL	Pg	g/dL	%	K/uL	fL
MEDIUM041	6.86	2.11	3.78	0.96	0.010	0.000	30.81	55.03	14.02	0.14	0.00	9.12	16.3	48.5	53.2	17.9	33.6	16.9	657	6.90
MEDIUM041	6.66	2.16	3.42	1.07	0.010	0.000	32.42	51.31	16.06	0.22	0.00	8.85	16.4	48.1	54.3	18.5	34.1	16.2	622	6.80
41	6.76	2.14	3.60	1.02	0.010	0.000	31.62	53.17	15.04	0.18	0.00	8.99	16.4	48.3	53.8	18.2	33.9	16.6	640	6.85
MEDIUM143	9.14	2.78	5.01	1.35	0.000	0.000	30.41	54.86	14.73	0.00	0.00	9.50	17.8	51.2	53.9	18.7	34.8	16.0	669	7.00
MEDIUM143	9.40	2.98	5.44	0.96	0.010	0.000	31.71	57.90	10.25	0.14	0.00	9.05	17.4	49.0	54.1	19.2	35.5	16.5	630	6.70
143	9.27	2.88	5.23	1.16	0.005	0.000	31.06	56.38	12.49	0.07	0.00	9.28	17.6	50.1	54.0	19.0	35.2	16.3	650	6.85
MEDIUM 045	9.58	2.53	6.08	0.93	0.030	0.010	26.44	63.47	9.67	0.28	0.15	9.11	16.1	48.5	53.2	17.7	33.2	16.5	680	7.20
MEDIUM 045	8.88	2.45	5.46	0.95	0.020	0.000	27.62	61.46	10.71	0.20	0.00	8.85	17.1	47.5	53.7	19.3	36.0	16.1	634	7.20
45	9.23	2.49	5.77	0.94	0.025	0.005	27.03	62.47	10.19	0.24	0.08	8.98	16.6	48.0	53.5	18.5	34.6	16.3	657	7.20
MEDIUM049	6.92	2.16	4.31	0.45	0.000	0.000	31.21	62.25	6.54	0.00	0.00	9.15	17.2	49.0	53.5	18.8	35.1	15.7	767	7.20
MEDIUM049	6.68	2.03	4.03	0.61	0.000	0.000	30.34	60.40	9.19	0.00	0.07	9.38	17.2	50.1	53.4	18.3	34.3	15.3	681	7.10
49	6.80	2.10	4.17	0.53	0.000	0.000	30.78	61.33	7.87	0.00	0.04	9.27	17.2	49.6	53.5	18.6	34.7	15.5	724	7.15
MEDIUM051	8.86	2.63	5.53	0.70	0.000	0.000	29.72	62.36	7.91	0.01	0.00	9.22	16.9	49.6	53.8	18.3	34.1	16.8	691	7.30
MEDIUM051	9.26	2.68	5.77	0.80	0.000	0.000	28.89	62.32	8.68	0.05	0.05	9.14	16.9	48.8	53.4	18.5	34.6	15.7	751	7.10
51	9.06	2.66	5.65	0.75	0.000	0.000	29.31	62.34	8.30	0.03	0.03	9.18	16.9	49.2	53.6	18.4	34.4	16.3	721	7.20
MEDIUM 053	8.52	2.64	5.19	0.66	0.030	0.000	30.99	60.94	7.75	0.31	0.00	8.42	15.4	46.0	54.6	18.3	33.5	15.3	665	6.80
MEDIUM 053	8.76	2.83	5.40	0.49	0.000	0.040	32.34	61.59	5.63	0.01	0.43	8.09	15.4	44.8	55.4	19.0	34.4	15.2	703	7.20
53	8.64	2.74	5.30	0.58	0.015	0.020	31.67	61.27	6.69	0.16	0.22	8.26	15.4	45.4	55.0	18.7	34.0	15.3	684	7.00
MEDIUM 055	7.70	1.68	5.35	0.67	0.000	0.000	21.81	69.44	8.69	0.06	0.00	8.82	15.8	48.2	54.6	17.9	32.8	16.5	661	7.00
MEDIUM 055	8.06	1.85	5.85	0.35	0.000	0.000	22.98	72.63	4.39	0.00	0.00	8.41	15.8	45.9	54.6	18.8	34.4	16.1	700	7.10
55	7.88	1.77	5.60	0.51	0.000	0.000	22.40	71.04	6.54	0.03	0.00	8.62	15.8	47.1	54.6	18.4	33.6	16.3	681	7.05
MEDIUM 057	7.32	2.11	4.44	0.71	0.050	0.010	28.85	60.66	9.69	0.66	0.13	9.46	17.1	51.0	53.9	18.1	33.5	15.6	658	7.20
MEDIUM 057	7.00	2.07	4.59	0.29	0.050	0.000	29.63	65.53	4.10	0.74	0.00	9.03	15.9	48.9	54.1	17.6	32.5	16.5	668	7.40
57	7.16	2.09	4.52	0.50	0.050	0.005	29.24	63.10	6.90	0.70	0.07	9.25	16.5	50.0	54.0	17.9	33.0	16.1	663	7.30
MEDIUM 059	7.48	2.55	4.41	0.52	0.000	0.000	34.09	59.01	6.90	0.00	0.00	9.41	17.5	50.8	54.0	18.6	34.4	16.2	696	7.00
MEDIUM 059	7.72	2.57	4.52	0.62	0.000	0.010	33.31	58.59	8.03	0.01	0.07	9.62	17.4	51.9	54.0	18.1	33.5	16.2	776	7.30
59	7.60	2.56	4.47	0.57	0.000	0.005	33.70	58.80	7.47	0.01	0.04	9.52	17.5	51.4	54.0	18.4	34.0	16.2	736	7.15
HIGH 061	7.50	2.02	4.75	0.71	0.020	0.000	26.99	63.29	9.51	0.21	0.00	9.10	16.9	50.0	54.9	18.6	33.8	17.0	743	6.70
HIGH 061	7.26	1.99	4.72	0.55	0.000	0.000	27.39	64.97	7.64	0.00	0.00	9.05	16.7	48.5	53.6	18.5	34.4	16.3	724	7.00
61	7.38	2.01	4.74	0.63	0.010	0.000	27.19	64.13	8.58	0.11	0.00	9.08	16.8	49.3	54.3	18.6	34.1	16.7	734	6.85
HIGH 063	7.88	2.53	4.42	0.93	0.000	0.000	32.16	56.05	11.79	0.00	0.00	9.18	16.6	48.7	53.1	18.1	34.1	16.1	689	7.10
HIGH 063	7.86	2.38	4.47	0.98	0.010	0.000	30.34	56.91	12.51	0.18	0.06	9.07	16.4	48.8	53.8	18.1	33.6	16.7	642	6.90
63	7.87	2.46	4.45	0.96	0.005	0.000	31.25	56.48	12.15	0.09	0.03	9.13	16.5	48.8	53.5	18.1	33.9	16.4	666	7.00
HIGH 065	9.14	2.28	6.18	0.64	0.030	0.000	24.97	67.66	6.95	0.37	0.05	8.93	15.7	48.6	54.4	17.6	32.3	16.5	653	6.90
HIGH 065	9.54	2.43	6.24	0.85	0.010	0.010	25.45	65.43	8.86	0.10	0.15	9.07	15.9	48.8	53.8	17.5	32.6	15.9	696	6.80
65	9.34	2.36	6.21	0.75	0.020	0.005	25.21	66.55	7.91	0.24	0.10	9.00	15.8	48.7	54.1	17.6	32.5	16.2	675	6.85
HIGH 067	7.74	2.28	4.85	0.61	0.000	0.000	29.43	62.65	7.93	0.00	0.00	9.67	17.1	51.9	53.7	17.7	32.9	16.5	715	7.00
HIGH 067	7.92	2.11	5.00	0.80	0.010	0.000	26.67	63.07	10.13	0.07	0.06	9.47	17.3	50.6	53.4	18.3	34.2	16.5	725	7.30
67	7.83	2.20	4.93	0.71	0.005	0.000	28.05	62.86	9.03	0.04	0.03	9.57	17.2	51.3	53.6	18.0	33.6	16.5	720	7.15
HIGH 071	5.70	1.67	3.46	0.54	0.030	0.000	29.23	60.73	9.41	0.55	0.08	8.58	15.5	47.6	55.5	18.1	32.6	15.8	697	7.00
HIGH 071	5.74	1.73	3.69	0.32	0.000	0.000	30.17	64.23	5.60	0.01	0.00	8.69	15.7	48.4	55.7	18.1	32.4	16.1	760	7.00
71	5.72	1.70	3.58	0.43	0.015	0.000	29.70	62.48	7.51	0.28	0.04	8.64	15.6	48.0	55.6	18.1	32.5	16.0	729	7.00
HIGH 073	8.64	2.32	5.73	0.56	0.020	0.000	26.87	66.36	6.50	0.26	0.00	9.33	16.6	51.9	55.6	17.8	32.0	16.1	713	7.10
HIGH 073	9.00	2.57	5.66	0.74	0.040	0.000	28.51	62.91	8.20	0.39	0.00	9.07	16.3	50.3	55.5	18.0	32.4	15.8	705	7.20
73	8.82	2.45	5.70	0.65	0.030	0.000	27.69	64.64	7.35	0.33	0.00	9.20	16.5	51.1	55.6	17.9	32.2	16.0	709	7.15
HIGH 075	9.06	2.07	6.34	0.61	0.030	0.000	22.90	70.02	6.73	0.35	0.00	8.97	15.6	49.1	54.7	17.4	31.8	15.7	712	7.10
HIGH 075	8.94	2.36	6.09	0.46	0.020	0.000	26.39	68.17	5.17	0.27	0.00	8.73	16.4	47.8	54.8	18.8	34.3	15.3	666	7.00
75	9.00	2.22	6.22	0.54	0.025	0.000	24.65	69.10	5.95	0.31	0.00	8.85	16.0	48.5	54.8	18.1	33.1	15.5	689	7.05
HIGH 079	7.46	1.79	5.14	0.53	0.000	0.000	23.97	68.84	7.11	0.02	0.06	8.95	15.9	49.3	55.1	17.8	32.3	16.1	705	6.90
HIGH 079	7.56	1.96	5.10	0.48	0.020	0.000	25.95	67.40	6.37	0.28	0.00	9.01	16.3	48.9	54.3	18.1	33.3	16.2	741	7.10
79	7.51	1.88	5.12	0.51	0.010	0.000	24.96	68.12	6.74	0.15	0.03	8.98	16.1	49.1	54.7	18.0	32.8	16.2	723	7.00

Note: Duplicate samples were run for each rat (*e.g.*, CONTROL001); the third number (*e.g.*, 1) is the mean value; CONTROL = 0 mg/m^3 SB-8; LOW = 200 mg/m^3 SB-8; MEDIUM = 700 mg/m^3 SB-8; HIGH = 2000 mg/m^3 SB-8

Hematology Values for Female Rats following Exposure to SB-8

Sample ID	WBC#	NE#	LY#	MO#	EO#	BA#	NE%	LY%	MO%	EO%	BA%	RBC	HB	HCT%	MCV	MCH	MCHC	RDW%	PLT	MPV
units	K/uL	K/uL	K/uL	K/uL	K/uL	K/uL	%	%	%	%	%	M/uL	g/dL	%	fL	Pg	g/dL	%	K/uL	fL
CONTROL002	5.14	1.31	2.86	0.97	0.000	0.000	25.48	55.67	18.82	0.02	0.00	8.50	16.2	49.0	57.6	19.1	33.1	14.5	671	7.60
CONTROL002	5.24	1.49	2.95	0.80	0.000	0.000	28.40	56.23	15.23	0.05	0.08	8.88	16.2	51.5	58.0	18.2	31.5	14.5	647	7.40
2	5.19	1.40	2.91	0.89	0.000	0.000	26.94	55.95	17.03	0.04	0.04	8.69	16.2	50.3	57.8	18.7	32.3	14.5	659	7.50
CONTROL004	5.44	1.22	3.81	0.39	0.020	0.000	22.38	70.11	7.17	0.34	0.00	7.87	16.8	46.4	59.0	21.3	36.2	13.9	791	6.80
CONTROL004	5.86	1.28	4.06	0.50	0.020	0.000	21.85	69.24	8.58	0.33	0.00	8.17	15.8	48.6	59.5	19.3	32.5	14.4	724	6.40
4	5.65	1.25	3.94	0.45	0.020	0.000	22.12	69.68	7.88	0.34	0.00	8.02	16.3	47.5	59.3	20.3	34.4	14.2	758	6.60
CONTROL006	9.60	1.67	7.18	0.71	0.030	0.010	17.35	74.81	7.41	0.33	0.10	8.91	17.2	53.1	59.6	19.3	32.4	15.0	723	7.00
CONTROL006	9.10	1.66	6.16	1.26	0.010	0.000	18.25	67.73	13.86	0.15	0.00	8.65	17.3	51.6	59.6	20.0	33.5	15.0	728	6.90
6	9.35	1.67	6.67	0.99	0.020	0.005	17.80	71.27	10.64	0.24	0.05	8.78	17.3	52.4	59.6	19.7	33.0	15.0	726	6.95
CONTROL008	6.58	1.53	4.38	0.67	0.000	0.000	23.25	66.55	10.13	0.07	0.00	8.10	15.7	48.4	59.7	19.4	32.4	14.4	707	7.10
CONTROL008	6.58	1.33	4.61	0.65	0.000	0.000	20.14	70.01	9.84	0.00	0.00	7.63	15.0	45.7	59.9	19.7	32.8	14.4	701	7.00
8	6.58	1.43	4.50	0.66	0.000	0.000	21.70	68.28	9.99	0.04	0.00	7.87	15.4	47.1	59.8	19.6	32.6	14.4	704	7.05
CONTROL010	4.94	1.15	3.53	0.25	0.000	0.000	23.22	71.53	5.16	0.00	0.09	8.37	16.1	49.5	59.1	19.2	32.5	14.2	702	6.50
CONTROL010	5.16	1.23	3.58	0.35	0.000	0.000	23.79	69.37	6.84	0.00	0.00	8.48	17.2	50.5	59.6	20.3	34.1	14.7	750	6.80
10	5.05	1.19	3.56	0.30	0.000	0.000	23.51	70.45	6.00	0.00	0.05	8.43	16.7	50.0	59.4	19.8	33.3	14.5	726	6.65
CONTROL012	6.94	1.60	4.84	0.50	0.000	0.000	23.00	69.73	7.26	0.01	0.00	8.67	15.4	51.3	59.2	17.8	30.0	14.2	643	7.20
CONTROL012	7.04	1.71	4.73	0.60	0.000	0.000	24.23	67.18	8.56	0.02	0.00	7.81	16.1	46.1	59.0	20.6	34.9	13.9	656	6.90
12	6.99	1.66	4.79	0.55	0.000	0.000	23.62	68.46	7.91	0.02	0.00	8.24	15.8	48.7	59.1	19.2	32.5	14.1	650	7.05
CONTROL014	6.86	1.56	4.63	0.67	0.000	0.000	22.74	67.49	9.70	0.07	0.00	8.51	16.4	50.9	59.8	19.3	32.2	14.6	840	7.00
CONTROL014	7.16	1.54	4.97	0.64	0.010	0.000	21.54	69.41	8.93	0.12	0.00	8.49	16.0	50.5	59.5	18.8	31.7	15.0	853	6.80
14	7.01	1.55	4.80	0.66	0.005	0.000	22.14	68.45	9.32	0.10	0.00	8.50	16.2	50.7	59.7	19.1	32.0	14.8	847	6.90
CONTROL018	7.34	1.34	5.24	0.76	0.010	0.000	18.19	71.33	10.40	0.07	0.00	8.16	15.0	48.6	59.6	18.4	30.9	14.2	791	7.40
CONTROL018	7.32	1.30	5.32	0.69	0.000	0.010	17.78	72.69	9.40	0.06	0.07	8.42	16.3	49.8	59.2	19.4	32.7	14.2	747	6.90
18	7.33	1.32	5.28	0.73	0.005	0.005	17.99	72.01	9.90	0.07	0.04	8.29	15.7	49.2	59.4	18.9	31.8	14.2	769	7.15
LOW022	4.94	1.23	2.60	1.11	0.000	0.000	24.86	52.60	22.45	0.10	0.00	8.17	16.3	48.0	58.7	20.0	34.0	14.7	618	6.60
LOW022	5.20	1.38	2.67	1.13	0.010	0.020	26.47	51.28	21.70	0.17	0.37	8.45	16.6	49.6	58.7	19.6	33.5	15.0	649	6.90
22	5.07	1.31	2.64	1.12	0.005	0.010	25.67	51.94	22.08	0.14	0.19	8.31	16.5	48.8	58.7	19.8	33.8	14.9	634	6.75
LOW 024	8.56	2.68	4.58	1.27	0.030	0.000	31.29	53.56	14.80	0.30	0.05	8.33	16.9	48.7	58.5	20.3	34.7	14.6	628	6.90
LOW 024	8.64	2.88	4.72	1.01	0.020	0.000	33.37	54.65	11.74	0.25	0.00	8.46	17.2	49.7	58.7	20.3	34.6	14.2	658	6.80
24	8.60	2.78	4.65	1.14	0.025	0.000	32.33	54.11	13.27	0.28	0.03	8.40	17.1	49.2	58.6	20.3	34.7	14.4	643	6.85
LOW 026	6.26	1.10	4.11	1.05	0.000	0.000	17.54	65.71	16.75	0.00	0.00	8.67	17.5	51.2	59.0	20.2	34.2	14.5	697	6.60
LOW 026	6.68	1.19	4.71	0.78	0.000	0.000	17.76	70.47	11.70	0.00	0.07	8.72	17.3	51.4	59.0	19.8	33.7	14.5	653	6.70
26	6.47	1.15	4.41	0.92	0.000	0.000	17.65	68.09	14.23	0.00	0.04	8.70	17.4	51.3	59.0	20.0	34.0	14.5	675	6.65
LOW 028	7.64	2.12	4.49	1.01	0.020	0.010	27.69	58.71	13.26	0.26	0.08	8.04	15.6	47.8	59.5	19.4	32.6	13.9	696	6.80
LOW 028	7.28	1.85	4.64	0.77	0.010	0.000	25.46	63.77	10.57	0.19	0.00	8.07	15.9	47.8	59.2	19.7	33.3	13.9	768	7.10
28	7.46	1.99	4.57	0.89	0.015	0.005	26.58	61.24	11.92	0.23	0.04	8.06	15.8	47.8	59.4	19.6	33.0	13.9	732	6.95
LOW 030	4.78	1.07	3.34	0.35	0.010	0.000	22.48	69.91	7.39	0.22	0.00	7.92	15.5	46.9	59.2	19.6	33.0	13.9	708	7.00
LOW 030	4.86	1.17	3.34	0.35	0.000	0.000	24.00	68.75	7.16	0.00	0.09	8.04	15.0	48.0	59.7	18.7	31.2	13.9	683	7.00
30	4.82	1.12	3.34	0.35	0.005	0.000	23.24	69.33	7.28	0.11	0.05	7.98	15.3	47.5	59.5	19.2	32.1	13.9	696	7.00
LOW 032	5.18	1.39	3.41	0.37	0.000	0.000	26.89	65.91	7.10	0.09	0.00	8.22	14.8	48.8	59.4	18.0	30.3	13.9	628	6.80
LOW 032	5.10	1.54	3.27	0.28	0.000	0.000	30.29	64.06	5.58	0.06	0.00	8.22	15.9	48.7	59.2	19.3	32.6	14.2	645	6.90
32	5.14	1.47	3.34	0.33	0.000	0.000	28.59	64.99	6.34	0.08	0.00	8.22	15.4	48.8	59.3	18.7	31.5	14.1	637	6.85
LOW 034	6.10	1.18	4.44	0.48	0.000	0.000	19.28	72.77	7.95	0.00	0.00	8.46	16.5	50.3	59.4	19.5	32.8	14.8	706	7.30
LOW 034	6.30	1.28	4.57	0.43	0.010	0.010	20.38	72.58	6.82	0.15	0.08	8.12	16.1	48.0	59.1	19.8	33.5	14.2	689	6.60
34	6.20	1.23	4.51	0.46	0.005	0.005	19.83	72.68	7.39	0.08	0.04	8.29	16.3	49.2	59.3	19.7	33.2	14.5	698	6.95
LOW 038	6.10	1.51	4.09	0.50	0.000	0.000	24.75	67.04	8.12	0.00	0.08	8.11	15.8	49.1	60.5	19.5	32.2	14.3	721	7.00
LOW 038	6.42	1.34	4.34	0.73	0.010	0.000	20.90	67.59	11.40	0.11	0.00	8.10	16.0	48.8	60.2	19.8	32.8	14.6	734	7.00
38	6.26	1.43	4.22	0.62	0.005	0.000	22.83	67.32	9.76	0.06	0.04	8.11	15.9	49.0	60.4	19.7	32.5	14.5	728	7.00
LOW 040	4.88	1.06	3.62	0.18	0.020	0.000	21.79	74.20	3.66	0.33	0.01	8.32	16.4	49.8	59.8	19.7	32.9	14.7	624	7.00
LOW 040	4.98	1.01	3.70	0.26	0.000	0.000	20.35	74.39	5.18	0.08	0.00	8.19	16.4	49.0	59.8	20.0	33.5	14.7	664	6.80
40	4.93	1.04	3.66	0.22	0.010	0.000	21.07	74.30	4.42	0.21	0.01	8.26	16.4	49.4	59.8	19.9	33.2	14.7	644	6.90

Sample ID	WBC#	NE#	LY#	MO#	EO#	BA#	NE%	LY%	MO%	EO%	BA%	RBC	HB	HCT%	MCV	MCH	MCHC	RDW%	PLT	MPV
units	K/uL	K/uL	K/uL	K/uL	K/uL	K/uL	%	%	%	%	%	M/uL	g/dL	%	fL	Pg	g/dL	%	K/uL	fL
MEDIUM042	5.42	1.33	3.34	0.75	0.000	0.000	24.47	61.57	13.88	0.08	0.00	8.21	16.6	48.6	59.2	20.2	34.2	14.9	659	6.50
MEDIUM042	5.18	1.34	3.00	0.85	0.000	0.000	25.84	57.83	16.32	0.00	0.00	8.45	16.7	49.6	58.7	19.8	33.7	14.7	745	7.00
42	5.30	1.34	3.17	0.80	0.000	0.000	25.16	59.70	15.10	0.04	0.00	8.33	16.7	49.1	59.0	20.0	34.0	14.8	702	6.75
MEDIUM 46	8.22	2.05	5.31	0.83	0.000	0.020	24.97	64.59	10.10	0.04	0.29	8.83	16.8	51.8	58.7	19.0	32.4	14.2	759	7.00
MEDIUM 46	7.96	2.00	5.12	0.82	0.010	0.010	25.13	64.32	10.25	0.13	0.17	8.78	17.3	51.9	59.1	19.7	33.3	13.9	740	6.60
46	8.09	2.03	5.22	0.83	0.005	0.015	25.05	64.46	10.18	0.09	0.23	8.81	17.1	51.9	58.9	19.4	32.9	14.1	750	6.80
MEDIUM 048	4.24	0.56	3.25	0.42	0.000	0.010	13.32	76.66	9.79	0.11	0.12	8.68	15.6	51.9	59.8	18.0	30.1	14.2	143	10.90
MEDIUM 048	4.28	0.74	3.25	0.28	0.000	0.000	17.36	75.94	6.49	0.11	0.11	8.22	16.7	49.4	60.1	20.3	33.8	14.3	109	9.50
48	4.26	0.65	3.25	0.35	0.000	0.005	15.34	76.30	8.14	0.11	0.12	8.45	16.2	50.7	60.0	19.2	32.0	14.3	126	10.20
MEDIUM050	5.24	0.99	3.93	0.32	0.000	0.000	18.92	74.95	6.04	0.09	0.00	8.21	16.7	48.9	59.6	20.3	34.2	14.4	670	6.90
MEDIUM050	5.24	1.05	3.71	0.47	0.000	0.000	20.09	70.87	8.96	0.09	0.00	8.06	16.0	48.4	60.1	19.9	33.1	15.0	624	6.70
50	5.24	1.02	3.82	0.40	0.000	0.000	19.51	72.91	7.50	0.09	0.00	8.14	16.4	48.7	59.9	20.1	33.7	14.7	647	6.80
MEDIUM052	5.22	1.29	3.29	0.61	0.030	0.000	24.64	63.08	11.72	0.56	0.00	8.14	16.1	48.4	59.5	19.8	33.3	14.2	623	6.70
MEDIUM052	5.42	1.42	3.42	0.56	0.010	0.010	26.18	63.04	10.35	0.25	0.18	7.96	16.2	47.1	59.2	20.4	34.4	13.9	655	7.10
52	5.32	1.36	3.36	0.59	0.020	0.005	25.41	63.06	11.04	0.41	0.09	8.05	16.2	47.8	59.4	20.1	33.9	14.1	639	6.90
MEDIUM054	8.18	2.12	5.57	0.48	0.010	0.000	25.89	68.10	5.90	0.12	0.00	8.48	17.1	50.1	59.1	20.2	34.1	13.9	764	7.20
MEDIUM054	8.14	2.09	5.51	0.53	0.020	0.000	25.62	67.63	6.51	0.25	0.00	8.80	17.3	52.3	59.4	19.7	33.1	14.2	704	6.60
54	8.16	2.11	5.54	0.51	0.015	0.000	25.76	67.87	6.21	0.19	0.00	8.64	17.2	51.2	59.3	20.0	33.6	14.1	734	6.90
MEDIUM056	7.28	1.12	5.60	0.53	0.010	0.020	15.36	76.91	7.23	0.19	0.33	8.28	16.4	49.8	60.1	19.8	32.9	14.4	639	7.20
MEDIUM056	7.42	1.08	5.85	0.48	0.020	0.000	14.53	78.79	6.46	0.22	0.00	8.20	16.3	49.7	60.6	19.9	32.8	14.6	606	6.80
56	7.35	1.10	5.73	0.51	0.015	0.010	14.95	77.85	6.85	0.21	0.17	8.24	16.4	49.8	60.4	19.9	32.9	14.5	623	7.00
MEDIUM 060	6.14	1.07	4.70	0.37	0.000	0.000	17.49	76.55	5.97	0.00	0.00	8.54	16.9	50.9	59.6	19.8	33.2	14.4	724	7.00
MEDIUM 060	5.98	1.09	4.71	0.17	0.000	0.000	18.19	78.82	2.83	0.07	0.08	8.70	16.0	51.7	59.4	18.4	30.9	14.7	732	6.50
60	6.06	1.08	4.71	0.27	0.000	0.000	17.84	77.69	4.40	0.04	0.04	8.62	16.5	51.3	59.5	19.1	32.1	14.6	728	6.75
HIGH 062	7.46	1.92	4.07	1.47	0.000	0.000	25.73	54.52	19.74	0.01	0.00	8.73	16.7	51.1	58.5	19.1	32.7	15.3	714	6.90
HIGH 062	7.18	1.94	3.68	1.53	0.010	0.010	27.05	51.24	21.32	0.20	0.20	9.07	16.6	54.0	59.5	18.3	30.7	15.1	688	6.70
62	7.32	1.93	3.88	1.50	0.005	0.005	26.39	52.88	20.53	0.11	0.10	8.90	16.7	52.6	59.0	18.7	31.7	15.2	701	6.80
HIGH 064	7.22	1.74	3.85	1.62	0.010	0.000	24.04	53.36	22.40	0.19	0.00	8.51	17.1	50.5	59.3	20.1	33.9	14.4	768	7.00
HIGH 064	7.20	1.54	4.57	1.08	0.000	0.000	21.39	63.54	15.01	0.00	0.06	8.64	16.9	51.7	59.8	19.6	32.7	14.7	787	6.80
64	7.21	1.64	4.21	1.35	0.005	0.000	22.72	58.45	18.71	0.10	0.03	8.58	17.0	51.1	59.6	19.9	33.3	14.6	778	6.90
HIGH 066	8.72	1.38	5.69	1.66	0.000	0.000	15.79	65.21	18.99	0.01	0.00	8.78	17.1	52.2	59.5	19.5	32.8	14.4	711	7.20
HIGH 066	8.24	1.38	5.58	1.26	0.020	0.000	16.75	67.76	15.24	0.20	0.05	8.08	17.5	48.4	59.9	21.7	36.2	14.4	664	6.70
66	8.48	1.38	5.64	1.46	0.010	0.000	16.27	66.49	17.12	0.11	0.03	8.43	17.3	50.3	59.7	20.6	34.5	14.4	688	6.95
HIGH 068	6.64	1.78	4.37	0.50	0.000	0.000	26.78	65.74	7.48	0.00	0.00	8.10	15.6	48.8	60.2	19.3	32.0	14.6	676	6.70
HIGH 068	6.68	1.72	4.46	0.49	0.010	0.000	25.68	66.82	7.36	0.15	0.00	8.15	16.1	49.6	60.8	19.8	32.5	14.7	708	6.60
68	6.66	1.75	4.42	0.50	0.005	0.000	26.23	66.28	7.42	0.08	0.00	8.13	15.9	49.2	60.5	19.6	32.3	14.7	692	6.65
HIGH 070	6.24	1.09	4.68	0.44	0.020	0.010	17.42	74.95	7.09	0.31	0.23	8.05	16.2	47.8	59.4	20.1	33.9	14.2	701	7.00
HIGH 070	5.96	0.92	4.61	0.42	0.010	0.000	15.49	77.27	7.07	0.17	0.00	8.04	16.4	47.6	59.2	20.4	34.5	13.9	705	6.90
70	6.10	1.01	4.65	0.43	0.015	0.005	16.46	76.11	7.08	0.24	0.12	8.05	16.3	47.7	59.3	20.3	34.2	14.1	703	6.95
HIGH 072	5.26	1.22	3.63	0.41	0.000	0.000	23.15	69.06	7.80	0.00	0.00	8.16	15.9	48.3	59.2	19.5	32.9	13.9	709	7.10
HIGH 072	5.14	1.03	3.68	0.41	0.010	0.010	20.05	71.53	7.93	0.21	0.28	8.28	16.0	49.3	59.5	19.3	32.5	14.2	663	6.90
72	5.20	1.13	3.66	0.41	0.005	0.005	21.60	70.30	7.87	0.11	0.14	8.22	16.0	48.8	59.4	19.4	32.7	14.1	686	7.00
HIGH 074	5.56	1.46	3.65	0.41	0.000	0.040	26.34	65.69	7.29	0.01	0.67	8.13	15.6	48.4	59.5	19.2	32.2	14.5	615	6.70
HIGH 074	5.32	1.25	3.76	0.30	0.010	0.000	23.45	70.69	5.72	0.15	0.00	7.92	15.6	47.1	59.5	19.7	33.1	15.0	753	7.00
74	5.44	1.36	3.71	0.36	0.005	0.020	24.90	68.19	6.51	0.08	0.34	8.03	15.6	47.8	59.5	19.5	32.7	14.8	684	6.85
HIGH 144	4.40	1.10	2.91	0.38	0.000	0.000	25.00	66.15	8.74	0.00	0.11	8.76	16.2	51.2	58.5	18.5	31.6	14.6	705	7.10
HIGH 144	4.28	1.17	2.77	0.34	0.000	0.000	27.30	64.76	7.83	0.00	0.11	8.24	15.8	48.5	58.8	19.2	32.6	14.7	650	7.20
144	4.34	1.14	2.84	0.36	0.000	0.000	26.15	65.46	8.29	0.00	0.11	8.50	16.0	49.9	58.7	18.9	32.1	14.7	678	7.15
HIGH 078	6.50	1.75	4.24	0.48	0.020	0.000	26.96	65.29	7.38	0.36	0.00	7.88	16.2	47.4	60.2	20.6	34.2	14.0	716	7.00
HIGH 078	6.44	1.75	4.19	0.50	0.010	0.000	27.10	65.04	7.71	0.15	0.00	8.39	16.3	50.9	60.7	19.4	32.0	14.3	737	6.80
78	6.47	1.75	4.22	0.49	0.015	0.000	27.03	65.17	7.55	0.26	0.00	8.14	16.3	49.2	60.5	20.0	33.1	14.2	727	6.90

Note: Duplicate samples were run for each rat (*e.g.*, CONTROL002); the third number (*e.g.*, 2) is the mean value; CONTROL = 0 mg/m^3 SB-8; LOW = 200 mg/m^3 SB-8; MEDIUM = 700 mg/m^3 SB-8; HIGH = 2000 mg/m^3 SB-8

Clinical Chemistry Values for Male Control Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
1	sample hemolyzed - could not be analyzed								
3	3.0	136	92	124	20	47	231	0.3	2.7
5	3.1	105	60	66	15	46	241	0.3	2.6
7	3.8	98	103	123	24	64	560	0.5	3.6
141	3.3	99	146	244	17	53	319	0.5	3.0
11	2.9	173	83	77	21	52	249	0.3	2.6
13	3.2	170	88	117	15	51	211	0.3	2.7
15	2.8	177	86	104	15	52	96	0.4	2.6
17	2.7	111	85	97	17	47	174	0.4	2.7
19	2.8	114	78	88	15	48	210	0.4	2.5

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
1	sample hemolyzed - could not be analyzed							3
3	204	0.3	5.7	112	146	4.0	107	1
5	156	0.1	5.7	91	146	4.4	106	1
7	321	0.8	7.4	113	171	5.5	119	2
141	319	<0.1	6.3	51	178	5.3	118	2
11	187	<0.1	5.6	87	148	4.0	105	1
13	188	<0.1	5.9	133	145	4.2	106	1
15	193	<0.1	5.4	83	145	4.1	106	0
17	216	<0.1	5.4	135	177	5.3	121	0
19	209	<0.1	5.4	111	141	4.2	102	0

Clinical Chemistry Values for Female Control Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
2	3.2	121	74	97	21	63	122	0.4	2.4
4	2.9	72	105	145	18	67	735	0.3	2.6
6	3.6	71	249	362	29	69	435	0.4	2.8
8	sample hemolyzed - could not be analyzed								
10	3.5	71	86	120	15	93	244	0.5	3.0
12	3.5	161	78	97	26	80	382	0.6	2.8
14	3.1	112	77	91	16	68	185	0.3	2.6
16	3.5	74	81	105	18	84	599	0.4	2.8
18	2.8	108	70	82	15	69	531	0.3	2.3
20	3.5	78	71	106	15	72	504	0.3	2.7

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
2	153	0.2	5.6	30	147	4.6	110	2
4	140	0.5	5.5	20	162	6.4	118	2
6	182	0.8	6.4	31	131	5.1	98	2
8	sample hemolyzed - could not be analyzed							3
10	170	0.4	6.5	24	133	4.2	96	2
12	239	0.3	6.2	66	141	4.3	103	1
14	151	0.2	5.7	31	148	3.8	110	0
16	213	0.7	6.3	43	142	4.6	107	2
18	230	0.2	5.1	18	145	4.7	108	1
20	180	0.9	6.2	29	144	8.4	108	2

Clinical Chemistry Values for Male 200 mg/m^3 SB-8 Exposure Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
21	sample not analyzed								
23	3.3	146	93	93	23	57	278	0.6	3.0
25	3.3	114	136	176	21	47	499	0.4	3.0
27	2.7	94	62	88	13	41	195	0.4	2.6
29	sample hemolyzed - could not be analyzed								
31	2.5	130	63	80	14	45	188	0.3	2.3
33	2.9	151	82	88	15	49	241	0.4	2.6
35	3.6	202	113	124	28	80	263	0.9	4.1
37	2.8	132	70	91	16	45	174	0.2	2.7
39	2.8	94	99	115	18	49	789	0.5	2.6

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
21	sample not analyzed							NR
23	292	0.1	6.3	122	157	4.5	104	1
25	210	0.7	6.2	84	136	5.0	101	2
27	208	<0.1	5.3	52	143	4.5	104	1
29	sample hemolyzed - could not be analyzed							3
31	188	<0.1	4.8	56	144	3.8	106	1
33	236	<0.1	5.4	78	143	4.3	104	0
35	330	<0.1	7.7	146	192	4.9	129	1
37	182	<0.1	5.5	104	145	4.3	106	1
39	298	0.2	5.4	97	143	5.5	101	1

Clinical Chemistry Values for Female 200 mg/m^3 SB-8 Exposure Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
22	sample hemolyzed - could not be analyzed								
24	sample hemolyzed - could not be analyzed								
26	3.2	114	84	98	20	69	381	0.3	2.3
28	3.0	83	92	102	16	70	375	0.3	2.5
30	3.7	79	74	97	13	79	242	0.4	2.8
32	3.5	87	71	115	19	93	463	0.4	2.9
34	2.8	92	87	115	13	73	320	0.3	2.6
36	2.9	83	70	110	16	67	516	0.3	2.8
38	3.2	103	62	112	17	79	242	0.5	2.8
40	3.4	99	81	81	23	72	352	0.4	2.9

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
22	sample hemolyzed - could not be analyzed							3
24	sample hemolyzed - could not be analyzed							3
26	141	0.3	5.5	30	146	4.6	108	2
28	159	0.2	5.5	53	142	4.6	106	1
30	213	0.4	6.6	26	141	5.1	102	2
32	177	0.6	6.4	34	146	5.1	104	2
34	155	0.4	5.4	20	144	3.9	107	2
36	173	1.0	5.7	23	143	4.9	106	2
38	230	<0.1	5.9	33	142	4.3	103	1
40	230	0.5	6.3	37	142	4.8	101	1

Clinical Chemistry Values for Male 700 mg/m^3 SB-8 Exposure Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
41	3.3	141	94	97	25	56	373	0.6	3.2
143	3.0	140	73	79	19	48	218	0.4	2.6
45	3.0	129	64	88	18	50	194	0.4	2.6
47	sample hemolyzed - could not be analyzed								
49	3.3	104	93	106	18	53	306	0.4	2.7
51	3.2	135	79	85	19	53	271	0.4	2.8
53	3.7	208	115	143	29	66	361	0.9	3.3
55	2.7	108	68	85	14	52	229	0.4	2.5
57	2.9	119	146	195	18	53	197	0.5	2.7
59	3.2	101	94	104	21	63	346	0.5	2.8

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
41	251	0.2	6.5	109	NR	6.3	140	1
143	193	0.2	5.5	109	146	4.0	107	1
45	190	0.1	5.6	133	145	4.4	105	1
47	sample hemolyzed - could not be analyzed							3
49	308	0.1	5.9	39		6.3	140	2
51	206	0.2	6.0	94	146	4.1	105	1
53	363	0.4	7.0	104	154	4.3	103	0
55	200	<0.1	5.2	80	145	4.1	105	1
57	204	<0.1	5.6	109	149	4.3	106	1
59	360	0.3	5.9	54	151	4.3	108	1

Clinical Chemistry Values for Female 700 mg/m^3 SB-8 Exposure Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
42	sample hemolyzed - could not be analyzed								
44	3.9	123	106	96	23	102	428	0.7	3.4
46	3.7	93	87	104	21	84	444	0.5	3.1
48	3.3	71	51	117	16	74	510	0.4	2.8
50	sample hemolyzed - could not be analyzed								
52	3.4	111	99	92	17	88	141	0.4	2.9
54	2.8	95	66	73	16	71	132	0.4	2.5
56	3.3	118	69	116	16	81	251	0.4	2.4
58	sample hemolyzed - could not be analyzed								
60	3.4	93	76	98	18	93	196	0.6	3.1

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
42								3
44	193	0.4	7.3	37	194	10.0	133	1
46	215	1.0	6.8	37	154	5.0	105	2
48	165	0.8	6.1	38	154	5.2	111	2
50	sample hemolyzed - could not be analyzed							3
52	192	0.2	6.3	38	137	3.9	103	1
54	168	<0.1	5.3	33	145	4.1	107	1
56	168	<0.1	5.7	28	147	4.3	108	1
58	sample hemolyzed - could not be analyzed							3
60	214	0.2	6.6	24	162	5.0	108	0

Clinical Chemistry Values for Male 2000 mg/m^3 SB-8 Exposure Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
61	3.4	81	66	110	16	42	463	0.2	2.6
63	3.6	134	86	99	27	49	328	0.4	3.4
65	3.4	80	81	99	21	45	426	0.4	3.1
67	3.1	90	141	198	17	40	402	0.3	2.8
69	3.8	121	128	154	26	61	497	0.8	3.6
71	3.0	153	77	100	19	51	142	0.4	2.5
73	3.2	148	70	96	15	53	179	0.3	2.6
75	3.1	145	56	72	18	66	188	0.6	2.8
77	3.0	88	70	121	17	42	540	0.4	2.5
79	3.5	136	111	171	22	69	128	0.7	3.3

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
61	200	0.9	5.9	72	143	5.0	105	2
63	260	0.8	7.1	133	189	6.4	128	2
65	205	0.9	6.5	146	202	8.0	140	2
67	217	0.5	5.9	84	144	5.6	106	2
69	364	0.3	7.5	80	176	5.2	118	2
71	251	0.2	5.5	37	147	4.5	104	0
73	185	0.1	5.8	127	146	3.9	105	0
75	198	<0.1	5.9	120	142	4.1	104	1
77	199	0.4	5.5	71	144	4.8	105	NR
79	306	0.2	6.8	91	149	4.7	104	NR

Clinical Chemistry Values for Female 2000 mg/m^3 SB-8 Exposure Group Rats

animal #	ALB (g/dL)	ALKP (U/L)	ALT (U/L)	AST (U/L)	BUN (mg/dL)	CHOL (mg/dL)	CK (U/L)	CREA (mg/dL)	GLOB (g/dL)
62	sample hemolyzed - could not be analyzed								
64	3.2	93	77	71	19	70	210	0.3	2.5
66	2.9	89	64	93	13	71	278	0.4	2.3
68	2.9	80	73	103	20	58	499	0.3	2.6
70	sample hemolyzed - could not be analyzed								
72	3.6	146	83	87	17	85	238	0.5	3.1
74	3.1	132	119	162	23	59	308	0.3	2.5
144	2.7	144	69	82	19	61	173	0.5	2.6
78	2.9	81	59	76	13	71	238	0.3	2.8
80	3.6	68	91	147	18	84	738	0.5	2.7

animal #	GLU (mg/dL)	TBIL (mg/dL)	TP (g/dL)	TRIG (mg/dL)	Na+ (mmol/L)	K+ (mmol/L)	Cl- (mmol/L)	hemolysis level
62	sample hemolyzed - could not be analyzed							3
64	145	0.3	5.7	30	146	4.2	109	2
66	185	0.1	5.3	22	143	4.5	106	1
68	207	0.4	5.4	28	146	4.7	106	2
70	sample hemolyzed - could not be analyzed							3
72	164	0.3	6.7	33	129	4.1	98	1
74	223	0.3	5.7	46	146	3.8	107	1
144	189	<0.1	5.3	15	169	4.4	117	0
78	162	<0.1	5.7	15	145	3.8	106	0
80	226	0.5	6.3	36	141	7.4	102	2

APPENDIX I. MEASUREMENT OF α_{2u}-GLOBULIN PROTEIN IN KIDNEY SAMPLES

α_{2u}-Globulin Protein Data in Male Rats following Exposure to SB-8

Animal #	Group	Total Protein Concentration ug/mL	Total Protein Concentration mg/mL	Total Protein Concentration ng/mL	Initial Dilution Factor	Second Dilution Factor (males to 78, females to 12400)	ELISA Result ng/mL	Adjusted ELISA Result ng/mL	Adjusted ELISA Result ug/mL	ng A2U/ ng Total Protein	ug A2U/ mg Total Protein
1	Control	32970	32.970	32970125	1000	422.694	3.254	1375446	1375.446	0.04172	41.718
3	Control	22708	22.708	22707533	1000	291.122	3.058	890252	890.252	0.03921	39.205
5	Control	32988	32.988	32988329	1000	422.927	2.13	900835	900.835	0.02731	27.308
7	Control	29022	29.022	29022025	1000	372.077	3.73	1387848	1387.848	0.04782	47.821
141	Control	23900	23.900	23899905	1000	306.409	2.568	786858	786.858	0.03292	32.923
11	Control	29737	29.737	29737489	1000	381.250	2.316	882975	882.975	0.02969	29.692
13	Control	30207	30.207	30206579	1000	387.264	2.284	884511	884.511	0.02928	29.282
15	Control	30198	30.198	30198240	1000	387.157	3.085	1194379	1194.379	0.03955	39.551
17	Control	26389	26.389	26389476	1000	338.327	3.769	1275153	1275.153	0.04832	48.321
19	Control	30988	30.988	30988396	1000	397.287	2.344	931241	931.241	0.03005	30.051
21	Low	26799	26.799	26798917	1000	343.576	2.369	813931	813.931	0.03037	30.372
23	Low	23257	23.257	23256790	1000	298.164	4.951	1476210	1476.210	0.06347	63.474
25	Low	25547	25.547	25547381	1000	327.531	5.539	1814192	1814.192	0.07101	71.013
27	Low	29178	29.178	29177962	1000	374.076	3.791	1418124	1418.124	0.04860	48.603
29	Low	25547	25.547	25547381	1000	327.531	5.252	1720190	1720.190	0.06733	67.333
31	Low	25560	25.560	25560210	1000	327.695	3.857	1263920	1263.920	0.04945	49.449
33	Low	31618	31.618	31618448	1000	405.365	3.044	1233930	1233.930	0.03903	39.026
35	Low	27270	27.270	27270141	1000	349.617	8.161	2853226	2853.226	0.10463	104.628
37	Low	26781	26.781	26780979	1000	343.346	4.301	1476731	1476.731	0.05514	55.141
39	Low	22192	22.192	22191959	1000	284.512	3.068	872884	872.884	0.03933	39.333
41	Medium	26340	26.340	26339898	1000	337.691	4.073	1375415	1375.415	0.05222	52.218
143	Medium	31436	31.436	31436425	1000	403.031	4.347	1751976	1751.976	0.05573	55.731
45	Medium	26034	26.034	26034342	1000	333.774	5.969	1992295	1992.295	0.07653	76.526
47	Medium	28679	28.679	28678962	1000	367.679	5.267	1936565	1936.565	0.06753	67.526
49	Medium	30270	30.270	30269525	1000	388.071	3.165	1228244	1228.244	0.04058	40.577
51	Medium	30234	30.234	30234173	1000	387.618	7.946	3080009	3080.009	0.10187	101.872
53	Medium	31333	31.333	31333315	1000	401.709	5.281	2121426	2121.426	0.06771	67.705
55	Medium	27360	27.360	27359848	1000	350.767	4.12	1445161	1445.161	0.05282	52.821
57	Medium	33886	33.886	33885715	1000	434.432	4.336	1883698	1883.698	0.05559	55.590
59	Medium	32796	32.796	32795771	1000	420.459	3.402	1430400	1430.400	0.04362	43.615
61	High	28246	28.246	28246147	1000	362.130	6.581	2383178	2383.178	0.08437	84.372
63	High	29425	29.425	29424866	1000	377.242	4.269	1610446	1610.446	0.05473	54.731
65	High	24527	24.527	24526567	1000	314.443	5.355	1683843	1683.843	0.06865	68.654
67	High	27568	27.568	27568042	1000	353.436	6.566	2320664	2320.664	0.08418	84.179
69	High	29744	29.744	29743793	1000	381.331	4.355	1660695	1660.695	0.05583	55.833
71	High	29360	29.360	29360378	1000	376.415	6.834	2572421	2572.421	0.08762	87.615
73	High	25288	25.288	25288433	1000	324.211	7.246	2349231	2349.231	0.09290	92.897
75	High	26433	26.433	26433461	1000	338.891	6.387	2164494	2164.494	0.08188	81.885
77	High	38071	38.071	38070733	1000	488.086	7.075	3453211	3453.211	0.09071	90.705
79	High	27013	27.013	27012658	1000	346.316	2.991	1035832	1035.832	0.03835	38.346

Note: Control = 0 mg/m^3 SB-8; Low = 200 mg/m^3 SB-8; Medium = 700 mg/m^3 SB-8; High = 2000 mg/m^3 SB-8

α_{2u}-Globulin Protein Data in Female Rats following Exposure to SB-8

Animal #	Group	Total Protein Concentration ug/mL	Total Protein Concentration mg/mL	Total Protein Concentration ng/mL	Initial Dilution Factor	Second Dilution Factor (males to 78, females to 12400)	ELISA Result ng/mL	Adjusted ELISA Result ng/mL	Adjusted ELISA Result ug/mL	ng A2U/ ng Total Protein	ug A2U/ mg Total Protein
2	Control	25352	25.352	25351686	1000	2.044	3.207	6557	6.557	0.00026	0.259
4	Control	28960	28.960	28959650	1000	2.335	1.532	3578	3.578	0.00012	0.124
6	Control	28585	28.585	28585399	1000	2.305	1.085	2501	2.501	0.00009	0.088
8	Control	26941	26.941	26941372	1000	2.173	3.726	8095	8.095	0.00030	0.300
10	Control	34141	34.141	34141233	1000	2.753	1.669	4595	4.595	0.00013	0.135
12	Control	26767	26.767	26766587	1000	2.159	1.639	3538	3.538	0.00013	0.132
14	Control	30408	30.408	30407641	1000	2.452	1.378	3379	3.379	0.00011	0.111
16	Control	25488	25.488	25488087	1000	2.055	3.082	6335	6.335	0.00025	0.249
18	Control	28804	28.804	28803712	1000	2.323	2	4646	4.646	0.00016	0.161
20	Control	24996	24.996	24996003	1000	2.016	2.731	5505	5.505	0.00022	0.220
22	Low	27213	27.213	27213149	1000	2.195	2.638	5789	5.789	0.00021	0.213
24	Low	23741	23.741	23740619	1000	1.915	2.515	4815	4.815	0.00020	0.203
26	Low	27049	27.049	27049224	1000	2.181	3.458	7543	7.543	0.00028	0.279
28	Low	23167	23.167	23167188	1000	1.868	1.727	3227	3.227	0.00014	0.139
30	Low	26180	26.180	26179975	1000	2.111	2.225	4698	4.698	0.00018	0.179
32	Low	27272	27.272	27272468	1000	2.199	4.075	8963	8.963	0.00033	0.329
34	Low	31457	31.457	31457486	1000	2.537	2.383	6045	6.045	0.00019	0.192
36	Low	25815	25.815	25814610	1000	2.082	2.279	4744	4.744	0.00018	0.184
38	Low	24853	24.853	24853436	1000	2.004	1.283	2572	2.572	0.00010	0.103
40	Low	27723	27.723	27723162	1000	2.236	1.344	3005	3.005	0.00011	0.108
42	Medium	25861	25.861	25861403	1000	2.086	3.038	6336	6.336	0.00025	0.245
44	Medium	27955	27.955	27954880	1000	2.254	1.696	3824	3.824	0.00014	0.137
46	Medium	27623	27.623	27622655	1000	2.228	2.538	5654	5.654	0.00020	0.205
48	Medium	27168	27.168	27167551	1000	2.191	4.913	10764	10.764	0.00040	0.396
50	Medium	24959	24.959	24958737	1000	2.013	2.686	5406	5.406	0.00022	0.217
52	Medium	23796	23.796	23795888	1000	1.919	2.841	5452	5.452	0.00023	0.229
54	Medium	26330	26.330	26329690	1000	2.123	3.714	7886	7.886	0.00030	0.300
58	Medium	23814	23.814	23813709	1000	1.920	3.783	7265	7.265	0.00031	0.305
60	Medium	23925	23.925	23925093	1000	1.929	2.287	4413	4.413	0.00018	0.184
62	High	27609	27.609	27609001	1000	2.227	4.33	9641	9.641	0.00035	0.349
64	High	25943	25.943	25943321	1000	2.092	3.48	7281	7.281	0.00028	0.281
66	High	28688	28.688	28687598	1000	2.314	1.106	2559	2.559	0.00009	0.089
70	High	25274	25.274	25274319	1000	2.038	1.128	2299	2.299	0.00009	0.091
72	High	31623	31.623	31623047	1000	2.550	2.467	6291	6.291	0.00020	0.199
74	High	28634	28.634	28633749	1000	2.309	1.624	3750	3.750	0.00013	0.131
144	High	32497	32.497	32496841	1000	2.621	1.058	2773	2.773	0.00009	0.085
78	High	24950	24.950	24949826	1000	2.012	5.296	10656	10.656	0.00043	0.427
80	High	25159	25.159	25159228	1000	2.029	2.364	4796	4.796	0.00019	0.191

Note: Control = 0 mg/m^3 SB-8; Low = 200 mg/m^3 SB-8; Medium = 700 mg/m^3 SB-8; High = 2000 mg/m^3 SB-8

APPENDIX J. BONE MARROW MICRONUCLEI GENOTOXICITY ASSAY DATA

Group	Gender	Animal #	#RET	#MN-RET	%RET	%MN-RET	Group	Gender	Animal #	#RET	#MN-RET	%RET	%MN-RET
C	M	81	23612	33	14.2	0.14	C	F	82	25347	64	14.8	0.25
C	M	83	8096	9	9.52	0.11	C	F	84	6906	2	27.48	0.03
C	M	85	10804	3	23.3	0.03	C	F	86	9849	11	24.93	0.11
C	M	87	7660	15	22.14	0.2	C	F	88	10260	15	26.94	0.15
C	M	89	12292	16	22.21	0.13	C	F	90	4771	9	13.28	0.19
L	M	91	41282	63	23.73	0.15	L	F	92	9605	3	11.73	0.03
L	M	93	13450	6	23.07	0.04	L	F	94	6941	8	17.52	0.12
L	M	95	14744	5	23.11	0.03	L	F	96	12773	9	22.77	0.07
L	M	97	4960	2	31.23	0.04	L	F	98	6544	5	19.52	0.08
L	M	99	6018	17	24.23	0.28	L	F	100	6198	4	16.49	0.06
M	M	101	33348	48	15.58	0.14	M	F	102	29089	42	14.15	0.14
M	M	103	13811	12	35.89	0.09	M	F	104	12896	12	26.83	0.09
M	M	105	26041	35	35.18	0.13	M	F	106	9707	90	16.15	0.92
M	M	107	3987	4	12.8	0.1	M	F	108	11504	8	30.24	0.07
M	M	109	8768	7	32.85	0.08	M	F	110	6853	4	24.33	0.06
H	M	111	53001	810	23.29	1.51	H	F	112	44065	74	9.34	0.17
H	M	113	9918	17	31.62	0.17	H	F	114	10312	13	19.55	0.13
H	M	115	14388	24	23.12	0.17	H	F	116	12010	15	31.55	0.12
H	M	117	12853	41	34.75	0.32	H	F	118	10438	12	19.78	0.11
H	M	119	8952	9	22.35	0.1	H	F	120	7211	8	18.58	0.11
NC	M	121	24665	66	27.62	0.27	NC	F	122	38324	106	18.73	0.28
NC	M	123	12442	8	35.88	0.06	NC	F	124	10138	27	25.13	0.27
NC	M	125	8564	11	20.98	0.13	NC	F	126	1828	2	6.78	0.11
NC	M	127	9246	12	30.86	0.13	NC	F	128	10576	18	24.83	0.17
NC	M	129	4777	7	21.98	0.15	NC	F	130	6979	10	31.56	0.14
PC	M	131	1356	15	22.74	1.09	PC	F	132	1184	30	11.48	2.47
PC	M	133	12664	60	18.5	0.47	PC	F	134	8881	28	9.62	0.31
PC	M	135	14517	62	17.4	0.43	PC	F	136	14156	70	17.27	0.49
PC	M	137	12033	60	29.08	0.5	PC	F	138	11296	46	19.64	0.41
PC	M	139	15836	87	22.1	0.55	PC	F	140	4498	23	11.36	0.51

Note: PC = positive control; NC = negative control; C = control (0 mg/m^3 SB-8); L = 200 mg/m^3 SB-8; M = 700 mg/m^3 SB-8; H = 2000 mg/m^3 SB-8; MN-RET = micronucleated reticulocytes; RET = reticulocytes

LIST OF ACRONYMS

α_{2u}-globulin	alpha-2-urinary globulin
AAALAC	Association for Assessment and Accreditation of Laboratory Animal Care
AFB	Air Force Base
ANOVA	analysis of variance
APS	aerodynamic particle sizer
ATJ	alcohol to jet
AVMA	American Veterinary Medical Association
bio	biologically-derived
CASA	computer assisted sperm analysis
CP	cyclophosphamide
CPG	chronic progressive glomerulonephropathy
CWP	Coalition Warfare Program
DTIC	Defense Technical Information Center
ELISA	enzyme-linked immunosorbent assay
EPA	Environmental Protection Agency
FOB	functional observational battery
FT	Fischer-Tropsch
FTIR	Fourier transform infrared
GC	gas chromatography
GLP	Good Laboratory Practices
GSD	geometric standard deviation
HEFA	hydroprocessed esters and fatty acids
HEFA-F	HEFA-animal fats and oils
HEFA-C	HEFA-camelina
HEFA-T	HEFA-Tallow
HEPA	high efficiency particulate air
HJF	Henry M. Jackson Foundation for the Advancement of Military Medicine
IACUC	Installation Animal Care and Use Committee
INR	international normalized ratio
JP-8	jet propulsion-8
MMAD	mass median aerodynamic diameter
NAMRU-D	Naval Medical Research Unit – Dayton
OECD	Organisation for Economic Cooperation and Development
OPPTS	Office of Prevention, Pesticides and Toxic Substances
OSD	Office of the Secretary of Defense
PT-P	prothrombin time in plasma
SB	Swedish Biofuel
SD	standard deviation
SKA	synthetic kerosene with aromatics
SPK	synthetic paraffinic kerosene
THRU	Toxic Hazard Research Unit